THOMSON MULTI MEDIA

Brandt **FERGUSON** **TH0MS0N**

SERVICE MANUAL
DOCUMENTATION TECHNIQUE
TECHNISCHE DOKUMENTATION
DOCUMENTAZIONE TECNICA
DOCUMENTACION TECNICA

X1000

WARNING : Before servicing this chassis please read the safety recommendations.
ATTENTION : Avant toute intervention sur ce châssis, lire les recommandations de sécurité.
ACHTUNG : Vor jedem Eingriff auf iesem Chassis, die Sicherheitsvorschriffen lesen.
ATTENZIONE : Prima di intervenire sullo chassis, leggere le norme di sicurezza.
IMPORTANTE : Antes de cualquier intervención, leer las recomendaciones de seguridad.

Do not disconnect modules when they are energized!
Repairs on powersupply section are to be carried out only with isolating transformer.

Ne pas retirer les modules lorsqu'ils sont sous tension. N'effectuer les travaux de maintenance sur la partie reliée au secteur(Switch Mode)qu'au travers d'un transformateur d'isolement.

Module nicht bei eingeschaltetem Gerät entfermen!
Servicearbeiten am Netzteil nur nuter verwendung eines Regeltrenntrafos durchfuhren.

Non scollegare le piastre quando sono alimentate!
Per le riparazioni sulla sezione alimentatore, utilizzare un trasformatore isolatore.

No desconectar los módulos cuando están activados. Las reparaciones en la sección de alimentación de energia deben ser ejecutadas solamente con un transformador de separación.

⚠ Indicates critical safety components, and identical components should be used for repiacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠)par des composants non homologués selon la
Norme CEI 65entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile(mit dem Symbol ⚠ gekennzeichnet) nicht durch Original - Ersatzteile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione del componenti di sicurezza(evidenziati con il segno ⚠)con compinenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.

La sustitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

MEASIRE,EMTCONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN
CONDIZIONI DI MISURA - CONDICIONES DE MEDIDAS

RECEIVER
On UHF, input level:1mV, bartest pattern:
-PAL, I standard, 100% white.

Via the scart socket, input level:1Vpp, bar test pattern:

Colour, contrast and brightness at mid-position, sound at minimum.
Programme selected: PR01.

DC voltages measured between the point and earth using a digital volmeter.

RECEPPTEUR:
En UHF, niveau d'entrée 1mV mire de barres
-SECAM, Norme L, blanc 100%

Par la prise Péritélévision, niveau d'entrée 1Vcc, mire de barres.

Couleur, contraste, lumiere à mi-course, son minimum.
Programme affecté PR01.

Tensions continues relevées par rapport à la masse avec un voltmètre numérique.

EMPFÄNGER:
Bel UHF Eingangspegel 1mV, Farbbalken:
-PAL, Norm G, D/K, Weiss 100%

Über die Scarbuchse : Eingangspegel 1Vss, Farbbalken:

Farbe, Kontrast, Helligkeit in der Mitte des Bereichs, Ton auf Minimum.
Zugeordnetes Programm PR01.
Gleichspannungen mit einem digitalen Voltmeter zur Masse gemessen.

RICEVITORE:
In UHF, livello d'entrata 1mV, monoscopio con barre:
-PAL, nomaG, bianco 100%

Via SCART, livello d'entrata 1Vpp, monoscopio con barre:

Colore, Contrasto, Luminositá a meta corsa, Suono minimo.
Programma designato PR01.

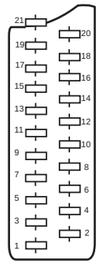
Tensioni continue rilevate rispelto alla massa con un voltametro digitale

RECEPTOR:
En UHF, nivel de entrada 1mV, mira de barras:
-PAL, norma G, blanco 100%.

Por la toma Peritelevision, nivel de entrada 1Vpp mira de barras.

Color, Contraste, luz a mitad de carrera, Sonido minimo.
Programa afectado PR01.

Tensiones continuas marcadas en relacion a la masa con un voltimetro digital.



	ENGLISH	FRANçAIS	DEUTSCH	ITALIAN	ESPAÑOL
1 ⊖→	AUDIO"R"	AUDIO"D"	AUDIO"R"	AUDIO"D"	AUDIO"D"
2 →⊖	AUDIO"R"	AUDIO"D"	AUDIO"R"	AUDIO"D"	AUDIO"D"
3 ⊖→	AUDIO"L"	AUDIO"G"	AUDIO"L"	AUDIO"S"	AUDIO"I"
4 ⊥	AUDIO	AUDIO	AUDIO	AUDIO	AUDIO
5 ⊥	"BLUE"	"BLEU"	"BLAU"	"BLU"	"AZUL"
6 →⊖	AUDIO "L" MONO	AUDIO "G" MONO	AUDIO "L" MONO	AUDIO "S" MONO	AUDIO "I" MONO
7 →⊖	"BLUE"	"BLEU"	"BLAU"	BLU	AZUL
8 →⊖	SLOW SWITCH	COMMUT LENTE	AV UMSCHALTUNG	"COMMUTAZIONE LENTA""	COMMUTAZIONE LENTA"
9 ⊥	"GREEN"	"VERT"	"GRUN"	"VERDE"	VERDE"
10 **NC**					
11 →⊖	"GREEN"	"VERT"	"GRUN"	"VERDE"	"VERDE"
12 **NC**					
13 ⊥	"RED"	"ROUGE"	"ROT"	"ROSSO"	"ROJA"
14 **NC**					
15 →⊖	"RED"	"ROUGE"	"ROT"	"ROSSO"	"ROJA"
16 →⊖	FAST SWITCH	COMMUT. RAPIDE	AUSTASTUNG	"COMMUTAZIONE LENTA"	COMMUTAZIONE LENTA"
17 ⊥	VIDEO	VIDEO	VIDEO	VIDEO	VIDEO
18 ⊥	FAST SWITCH	COMMUT.RAPIDE	AUSTASTUNG	"COMMUTAZIONE LENTA"	"COMMUTAZIONE LENTA"
19 ⊖→	VIDEO	VIDEO	VIDEO	VIDEO	VIDEO
20 →⊖	VIDEO OR "SYNC"	VIDEO SYNCHRO	VIDEO ODER SYNCHRO	VIDEO O SINCRO	VIDEO O SINCRO
21 ⊖→	PLUG SCREENBOX	BLINDAGE PRISE	ABSCHIRMUNG DES STECKERS	INVOLUCRO METAL-LICO DELLAPRESA	BLINDAJEDEL ENCHUFE

→⊖ :INPUT - ENRTÈE-EINGANG-ENTRATA-ENTRADA • ⊖→ :OUTPUT-SORTIE-AUSGANG-USCITA-SALIDA • ⊥ :EARTH-MASSE-MASSE-MASSA-MASA

TECHNICAL DATA AND COMPOSITION OF VIDEO RECORDERS
CARACTERISTIQUES TECHNIQUES ET COMPOSION DES MAGNETOSCOPES
TECHNISCHE DATEN UND ZUSAMMENSETZUNG DER VIDEORECORDERS
CARATTERISTICHE TECNICHE DEI VIDEOREGISTRATORI
CARACTÉRISTICAS TECNICAS Y COMPOSICIÓN DE LOS VÍDEOS

POWER REQUIREMENT : Alimentation : Netzeil: Alimentazione: Alimentacion:	200-240V±10% 50/60Hz	4Heads Helical Scan system: 4têtes vidéo 4Video-Kopfe 4Testing Video 4Cabezas video:	Consumption Consommation: Leistungsaufnahme Consumo: Consumo:	17W 4.5W(ECO)
Programming: Programmation: Timer: Programmmazione: Programacion:	SHOWVIEW	2Heads Helical Scan system: 2têtes video: 2Video-köpfe: 2Testine video 2Cabezas video:	Sound: Son: Ton: Suono: Sonido:	Stereo
Tape speed: Vitesse de défilement: Bandgeschwindigkeit: Velocitá del nastro: Velocidad de la cinta:	SP SP/LP SP/LP/SLP	Tape format: VHS Format video Video-system Formato video: Formato video:	Power save: Sécurité secteur: Gangreserve: Riserva alimentazione: Seguridad red:	1min
SP = 23.39mm/sec		LP = 11.70 mm/sec	SLP : 33.35mm/sec.(only NTSC PB)	

GB For service information on the deck mechanism see separate publication "X1000 SERIES MECHANICAL ADJUSTMENTS"

F Pour toute intervention ou réglage sur la partie mécanique, se reporeter au FASCICULE MECANIQUE X1000 .

D Informationen über mechanische Einstellungen entnehmen Sie bitte dem Handbuch "MECHANISCHE EINSTELLUNGEN X1000".

I Ulteriori informazioni sulla meccanica si possono trovare nelle seguenti pubblicazioni: "SERIE X1000 REGOLAZIONI MECCANICHE".

E Para información de servicio técnico sobre el mecanismo de la platina, consulte la documentación separada "AJUSTES MECANICOS SERIES X1000".

SCHEMATIC DIAGRAMS & PCBs

Reference	Interconnect Wiring Diagram	Power Circuit Diagram	Syscon Circuit Diagram	A/V Circuit Diagram	Secam Color Circuit Diagram	Hi-Fi & SW Circuit Diagram	PIF Circuit Diagram	MAIN PCB
THOMSON								
VT2210G	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VT2220G	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VT4220G	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VTH6210G	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VTH6220G	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VTH6210U	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VTH6220U	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VT2220F	9-10	11-12	17-18	23-24	29-30	33-34	37-38	41-44
VT4220F	9-10	11-12	17-18	23-24	29-30	33-34	37-38	41-44
VTH6210F	9-10	11-12	17-18	23-24	29-30	33-34	37-38	41-44
VTH6220F	9-10	11-12	17-18	23-24	29-30	33-34	37-38	41-44
FERGUSON								
FV606HV	9-10	11-12	17-18	23-24	29-30	33-34	37-38	41-44
BRANDT								
VK2800PS	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44
VK8810PS	9-10	11-12	17-18	23-24	-	33-34	37-38	41-44

INFORMATION - INFORMATIONS - HINWEISE -
INFORMAZIONI - INFORMACIONES

GB The table below shows how the Commercial Reference corresponds to X1000 series Chassis Reference number, it also gives additionnal information that can be used to identfy the major components according to chassis type.

F Le tableau ci-dessous donne la correspondance entre les références commerciales et les types de chassis de la série X1000, de plus if apporte un complement d'informations permettant d'identifier les composants montes suivant les chassis

D Die untenstehende Tabelle zeigt die Zuordnung der Gerätebezeichnungen und der Chassisvarianten der Reihe X1000 an.

I La tabella sottostante indica la corrispondenza tra i fiferimenti commerciall e i tipi di telaio della serie X1000. Inoltre consente di identificare i principali componenti in base al tipo di telaio.

E El cuadro sigulente presenta la correspondencia ente las referencias comerciales y los tipos de chasis de la serie X1000, además ofrece una informacion complementaria que permite identificar los componentes montados según el tipo chasis.

Com. Ref.	Chassis	Mechadeck	Tuner	ECO
VT2210G	X1000	DRP-8200HVP	SSTMI-GKIQ1 LGTMI-GKIQ1 ALTMI-GKIQ1	YES
VT2220G	X1000	DRP-8200HVP		YES
VT4220G	X1000	DRP-8400HVP		YES
VTH6210G	X1000	DRP-8600HVP		YES
VTH6220G	X1000	DRP-8600HVP		YES
VTH6210U	X1000	DRP-8600HVP		YES
VTH6220U	X1000	DRP-8600HVP		YES
FV606HV	X1000	DRP-8600HVP		YES
VT2220F	X1000	DRP-8200HVP	SSTBI-SLKQ1 SSTBI-SLKQ2	YES
VK2800PS	X1000	DRP-8200HVP		YES
VT4220F	X1000	DRS-8400HVP		YES
VTH6210F	X1000	DRS-8600HVP	SSTBI-SLQ1 LGTBI-SLQ1	YES
VTH6220F	X1000	DRS-8600HVP		YES
VK8810PS	X1000	DRS-8600HVP		YES

GB

1.MAINTENANCE INSTRUCTIONS

For service information on the deck mechanism see separate publication <X1000 SERIES MECHANICAL ADJUSTMENTS>.

1.1 Resetting the video recorder

a) Disconnect the video recorder from the mains supply.
b) Hold down the <+> and <-> keys on the front panel and reconnect the video recorder to the mains supply. Release the <+> and <-> keys.
c) Resetting the video recorder also can be done in the service mode.

1.2 Service mode adjustments

Accessing the service mode

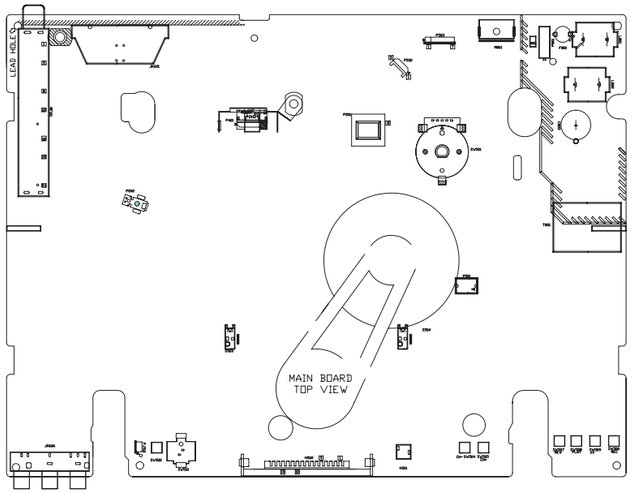
a) Press <menu> key on the remote control, then the summary menu is displayed on screen.
b) Sequential pressing the numbers as <3> ,<6>, and <9> will display the 5 items of service mode.
c) Each service mode can be accessed by pressing the digit key corresponding to the number on the left side. <0> key on the remote control will release the service mode.

1.3 Head switching point

a) Insert a protected test cassette into the video recorder. The VCR will automatically enter the play mode.
b) Next enter the service mode as described above.
c) Press <5> key on the remote control, then the video control data is displayed.
d) Press <Rec> key either on remote control or on the front panel.
<0> key on the remote control will release the video control data mode.

2. Electrical adjustments - Réglages étectriques - Elektrische Einstellungen- Regolazioni elettriche - Ajustes eléctricos

2.1 Test points and adjustment overview- Emplacement des points test el des réglages - Testpunkte und Abgieich- Überslcht - Punti test e panoramica generale delle regolazioni - Punto de prueba y emplazamientos de los ajustes.



2.2 On screen display (Main board)-OSD : Affichages sur l'écran (platine principale) - OSD : Hauptleiterplatte-
OSD : Visualizzazione su Schermo - OSD : Visualización en la pantalla

N	Item	Mode & Signal	Test equipment	Test point	Description
2.2.1	OSD chroma oscillator		Frequency counter	R542	Check for 17.73447MHz ±443HZ

2.3 Measurements Servo Section(Main Board) - Vérifications sur les circuits d'asservissements- Messungen Servotell - Controlli parte Servo - Verificationes para parte Servo.

N•	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.3.1	Oscillator frequency		Frequency conuter	IC501 pin38	None	Confirm f =16.0MHz±480Hz
2.3.2	Drum FF(Flip Flop)	PB/REC	Oscilloscope	IC501 pin 18	None	Check for 40ms±10μs
2.3.3	Capstan FG frequency	PB/REC(SP)	Frequency counter	IC501 pin 87	None	Check for f = 757Hz ±10Hz
2.3.4	Head switching	PB	Dual trace Oscilloscope Trigger ext. P503/4 (Drum FF)	Scart JK601 pin19	by software setup	1.Insert a protected test cassette into the video recorder. 2.The VCR will automatically enter the play mode. 3.Next enter the service mode. 4.Press <5>key on the remote control. 5.The video control data is displayed. 6.Press<Rec>key either on remote control or on the front panel. 7.<0> key on the remote control will release the wideo control data mode.

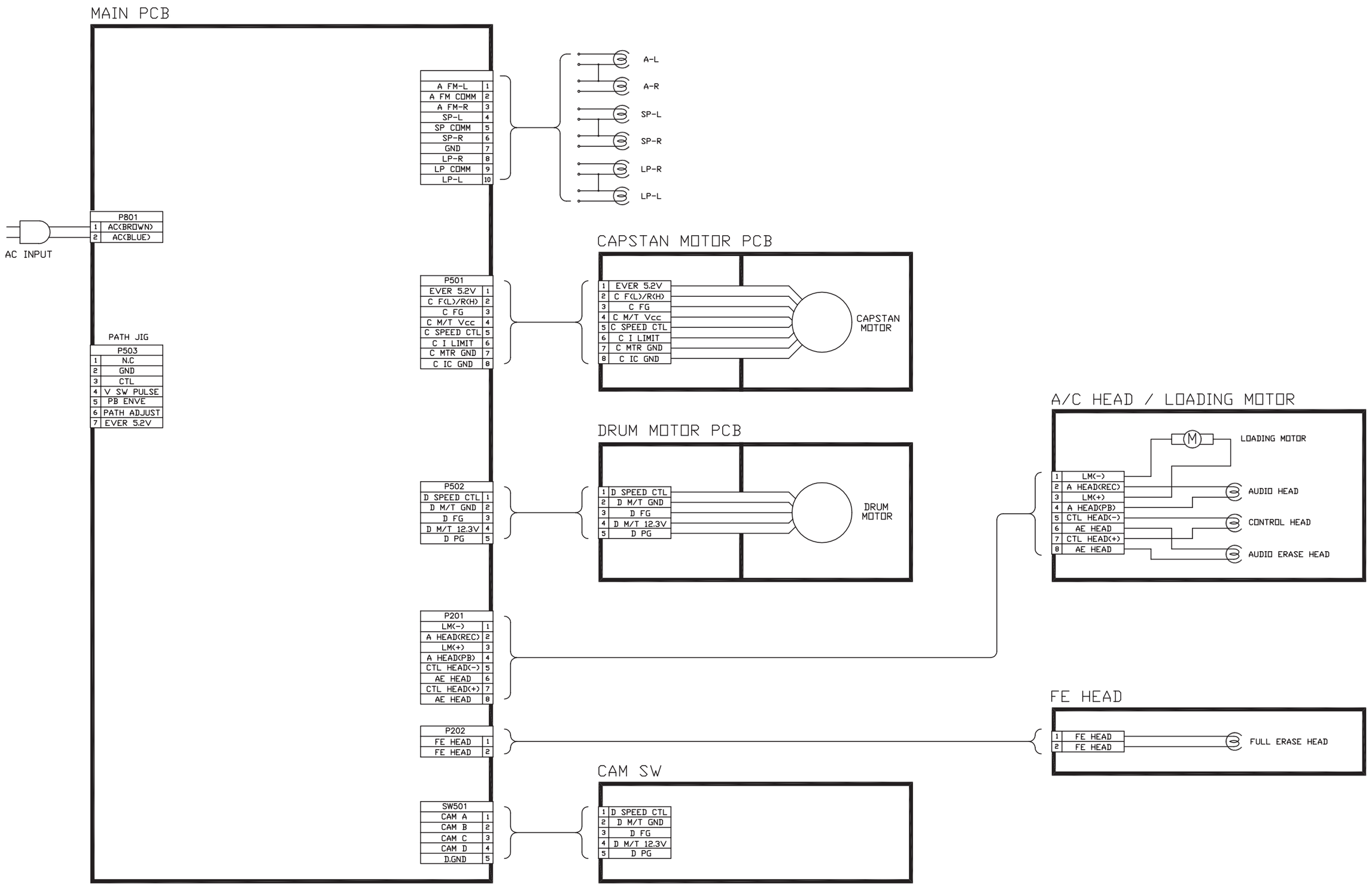
2.4 Video signal processing - Traltement video - video Signalteil - Elaborazione segnale video- Tratamiento video

N•	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.4.1	CVBS EE level	Select AV1 REC PAL PAL grey scale 1Vpp AV1 pin20	Oscilloscope	AV1 pin19	None	Check for VBS= 1Vpp±0.1Vpp BURST = 300mVpp±70mVpp
2.4.2	CVBS EE level	REC SECAM Colour bar 1Vpp AV 1 pin20	Oscilloscope	AV1 pin19	None	MAGENTA BAR=210MvPP±20Vpp

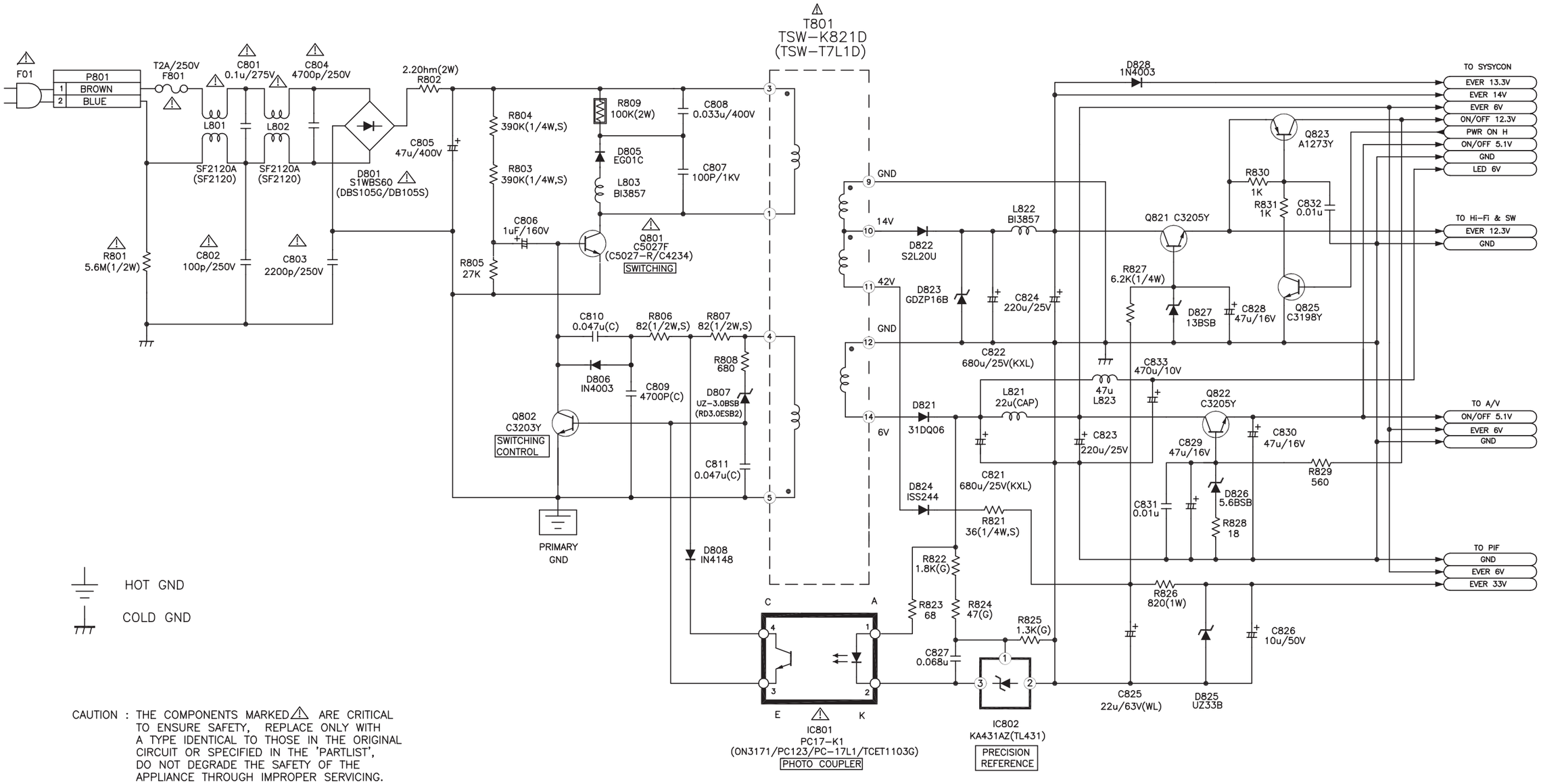
2.5 Audio signal processing - traltement audio - Audio Signalverarbeitung - Elaborazione segnale audio- Procesamiento audio

N•	Item	Mode & Signal	Test equipment	Test point	Adjustment point	Description
2.5.1	Bias oscilltor trequency &level	REC (Without signal)	Oscilloscope	P202 pin1	None	Check for 70KHz±5KHz 50Vpp±5Vpp

INTERCONNECT WIRING DIAGRAM



POWER CIRCUIT DIAGRAM



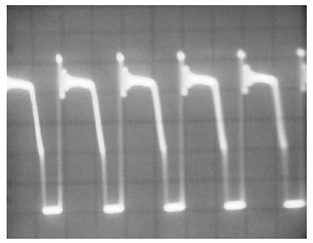
HOT GND

COLD GND

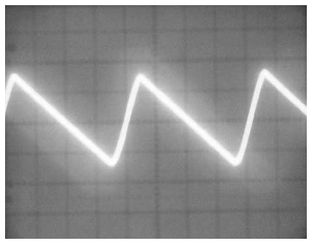
CAUTION : THE COMPONENTS MARKED⚠ ARE CRITICAL TO ENSURE SAFETY, REPLACE ONLY WITH A TYPE IDENTICAL TO THOSE IN THE ORIGINAL CIRCUIT OR SPECIFIED IN THE 'PARTLIST', DO NOT DEGRADE THE SAFETY OF THE APPLIANCE THROUGH IMPROPER SERVICING.

POWER		MODE		
LOC.	PIN	EE	PLAY	REC.
IC802	1	2.48	2.48	2.48
	2	0	0	0
	3	4.75	4.75	4.75
IC803	1	5.81	5.81	5.81
	2	4.75	4.75	4.75
	3	0.24	0.24	0.24
	4	2.6	2.6	2.6

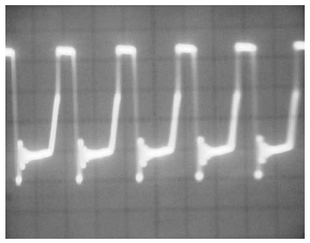
POWER		MODE		
LOC.	PIN	EE	PLAY	REC.
Q801	E	0	0	0
	B	-0.09	-0.09	-0.09
	C	275	275	275
Q802	E	0	0	0
	B	0.25	0.25	0.25
	C	-0.09	-0.09	-0.09
Q821	E	12.3	12.3	12.3
	B	13	13	13
	C	14	14	14
Q822	E	5.1	5.1	5.1
	B	5.77	5.77	5.77
	C	5.88	5.88	5.88
Q823	E	12.3	12.3	12.3
	B	11.7	11.7	11.7
	C	12.3	12.3	12.3
Q825	E	0	0	0
	B	0.72	0.72	0.72
	C	0.01	0.01	0.01



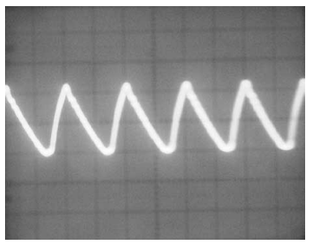
①T801 PIN 1 X : 0.1 kV DIV
Y : 5uS DIV



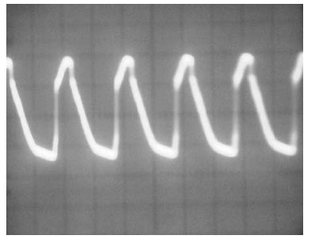
②T801 PIN 3 X : 2V DIV
Y : 2mS DIV



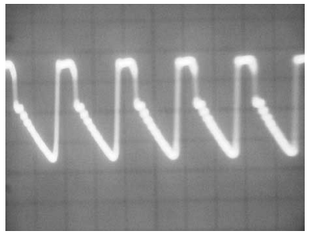
③T801 PIN 4 X : 5V DIV
Y : 5uS DIV



④IC801 PIN 3 X : 0.5V DIV
Y : 5uS DIV

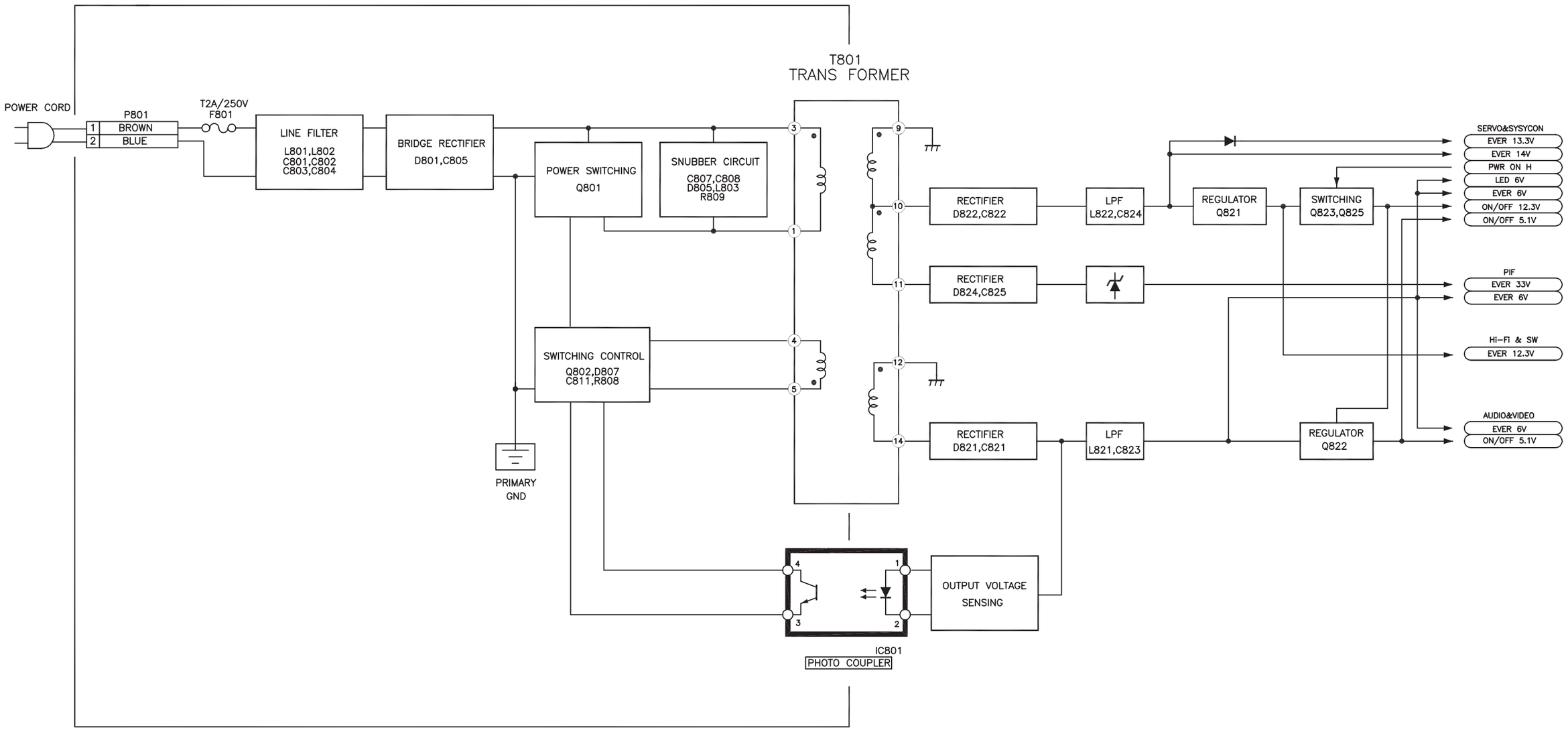


⑤IC801 PIN 4 X : 2V DIV
Y : 5uS DIV

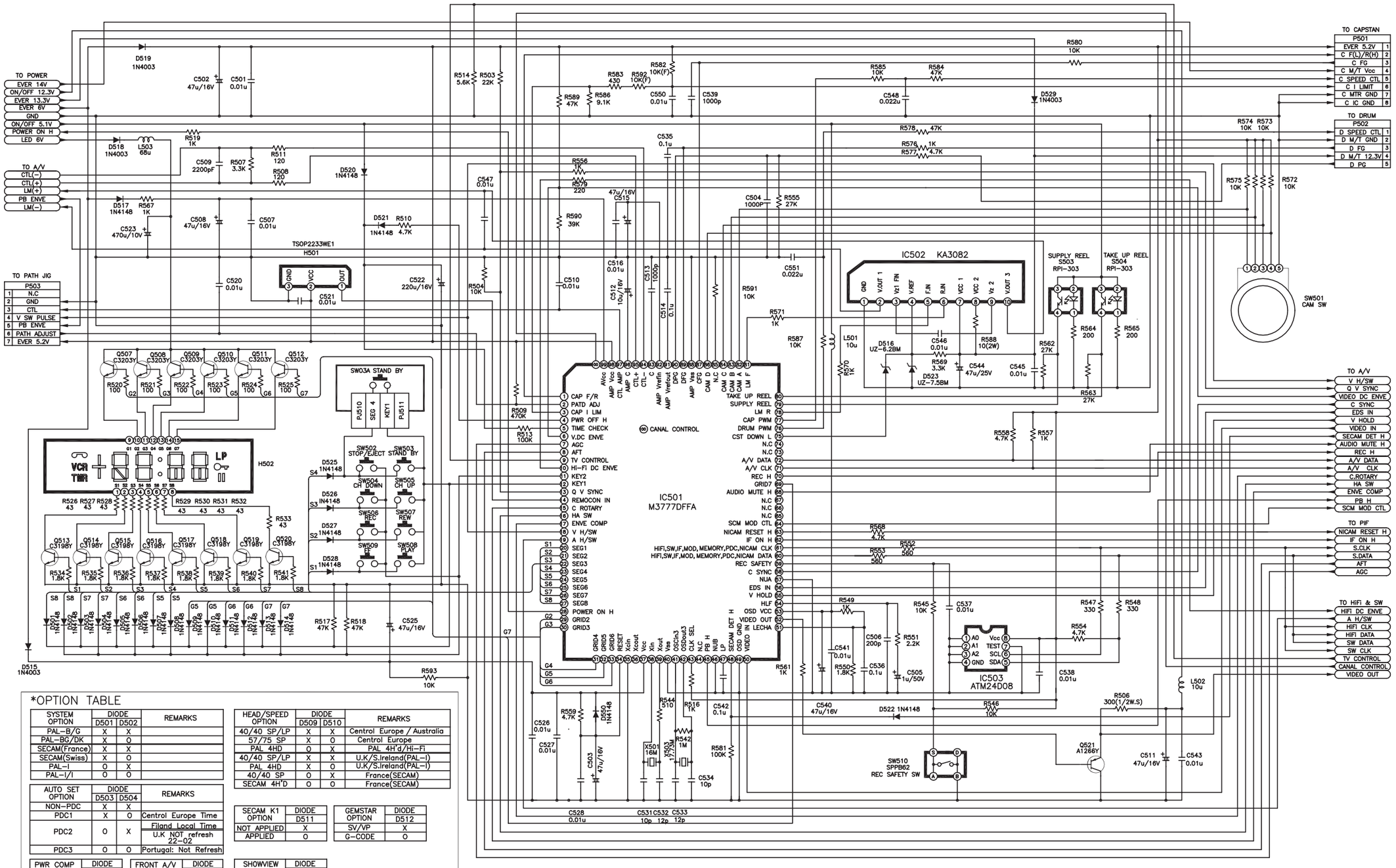


⑥Q801 base X : 0.5V DIV
Y : 5uS DIV

POWER BLOCK DIAGRAM



SYSCON CIRCUIT DIAGRAM



*OPTION TABLE

SYSTEM OPTION	DIODE D501	DIODE D502	REMARKS
PAL-B/G	X	X	
PAL-BG/DK	X	O	
SECAM(France)	X	X	
SECAM(Swiss)	X	O	
PAL-I	O	X	
PAL-I/I	O	O	

AUTO SET OPTION	DIODE D503	DIODE D504	REMARKS
NON-PDC	X	X	
PDC1	X	O	Central Europe Time
PDC2	O	X	Eland Local Time U.K NOT refresh 22-02
PDC3	O	O	Portugal: Not Refresh

PWR COMP OPTION	DIODE D507
1 MIN	X
30 MIN	O

FRONT A/V OPTION	DIODE D508
NOT APPLIED	X
APPLIED	O

HEAD/SPEED OPTION	DIODE D509	DIODE D510	REMARKS
40/40 SP/LP	X	X	Central Europe / Australia
57/75 SP	X	O	Central Europe
PAL 4HD	O	X	PAL 4H'd/Hi-Fi
40/40 SP/LP	X	X	U.K/S.Ireland(PAL-I)
PAL 4HD	X	O	U.K/S.Ireland(PAL-I)
40/40 SP	O	X	France(SECAM)
SECAM 4H'D	O	O	France(SECAM)

SECAM K1 OPTION	DIODE D511
NOT APPLIED	X
APPLIED	O

GEMSTAR OPTION	DIODE D512
SV/VP	X
G-CODE	O

SHOWVIEW OPTION	DIODE D513
NOT APPLIED	O
APPLIED	X

1.D505: 2PERI OPTION (A/V SW IC ENABLING)
1.D506: Hi-Fi OPTION (Hi-Fi IC ENABLING)

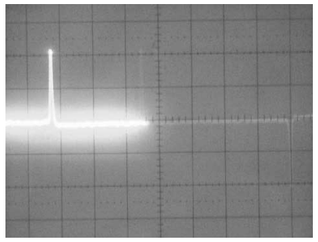
SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
IC501	1	5	0	0
	2	4.92	4.92	0
	3	1.53	1.54	1.5
	4	5.11	0	5
	5	5	5	5
	6	1.25	2.15	1.13
	7	3.86	0	3.8
	8	4.57	0	4.54
	9	0	3.92	0
	10	0.13	1.83	0
	11	1.82	4.08	2.37
	12	0.56	0.57	0.54
	13	5	0	5
	14	5	5	5
	15	2.54	2.55	2.5
	16	5.1	0	5
	17	-0.05	3.858	0.43
	18	2.54	2.55	2.54
	19	2.54	2.54	2.54
	20	2.46	1.86	1.22
	21	0.62	2.43	2.38
	22	1.22	1.083	1.8
	23	0.02	1.84	1.2
	24	0.02	2.44	0
	25	0.62	3.04	0.6
	26	0.62	1.84	1.8
	27	0.6	1.79	0.6
	28	0	4.97	4.9
	29	0.56	0.57	0.54
	30	0.56	0.55	0.54
	31	0.56	0	0.6
	32	0.61	0	0.6
	3	0.6	0.6	0.6
	34	0	5	5.13
	35	-0.05	0	0
	36	1.58	1.59	1.58
	37	5.16	0	5.16
	38	2.21	2.2	2.16
	39	2.22	0	0
	40	-0.05	0	-0.05
	41	2.33	2.35	2.33
	42	2.33	2.35	2.333
	43	5.16	5.2	5.16
	44	1.05	0.93	0.85
	45	-0.04	5.16	-0.05
	46	-0.04	0	0
	47	1.77	1.77	1.77
	48	0	0	0
	49	-0.04	0	-0.06
	50	0.88	2.02	0.88
	51	3.22	3.22	3.21
	52	2.03	2.03	2.03
	53	5	0	5
	54	2.1	2.11	0
	55	1.44	1.18	0
	56	0.04	2.11	0
	57	-0.04	0	-1.06
	58	0.6	0.34	0.6
	59	-0.04	5.16	-0.06
	60	4.6	4.5	4.45
	61	4.7	4.7	4.6

SYSCON		MODE		
LOC.	PIN	EE	PLAY	
IC501	62	5	0	5
	63	5.1	0	5
	64	2.55	2.54	2.54
	65	-0.036	5	-0.04
	66	-0.03	0	-0.04
	67	0	0	-0.02
	68	5	0	-0.04
	69	0.61	0.61	0.59
	70	-0.02	0	5
	71	5	5	4.98
	72	0	5	4.97
	73	0	5	5
	74	0	0	0
	75	0.43	0.42	0.43
	76	2.6	2.64	2.6
	77	0	2.67	0
	78	0	0	0
	79	0	0	0
	80	-0.05	0.05	-0.05
	81	0	0	-0.05
	82	-0.04	0	-0.05
	83	5.14	5	5
	84	5.14	5	0
	85	-0.04	0	-0.05
	86	-0.04	0	-0.05
	87	4.19	2.48	2.44
	88	0	0	0
	89	1.81	1.82	1.8
	90	0.46	0.46	0.46
	91	2.56	2.57	2.53
	92	2.56	2.57	2.53
	93	0.17	0.23	0.13
	94	2.53	2.54	2.19
	95	0	2.54	2.8
	96	2.56	2.57	2.53
	97	2.56	2.57	2.53
	98	5.15	5	5
	99	5.24	5	5.21
	100	0	0	0

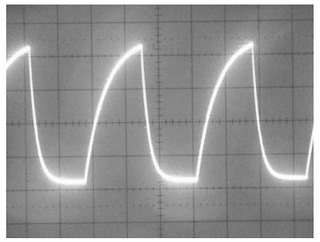
SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
IC502	1	0	0	0
	2	0.46	0.46	0.46
	3	0.82	0.82	0.82
	4	6.68	6.68	6.68
	5	0	0	0
	6	0	0	0
	7	12.5	12.5	12.5
	8	12.5	12.5	12.5
	9	0.85	0.85	0.85
	10	0.46	0.46	0.46

SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
IC503	1	0	0	0
	2	0	0	0
	3	0	0	0
	4	0	0	0
	5	4.6	4.6	4.6
	6	4.7	4.7	4.7
	7	0	0	0
	8	5	5	5

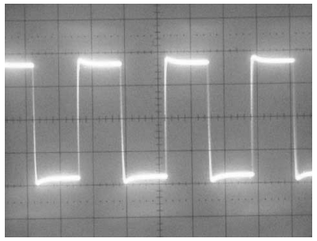
SYSCON		MODE		
LOC.	PIN	EE	PLAY	REC.
Q506	E	-0.03	-0.07	0
	B	-0.16	-0.2	-0.19
	C	5	5	5
Q507	E	1.95	1.7	1.63
	B	0.56	0.56	0.55
	C	5.1	5.1	5.1
Q508	E	1.48	1.55	1.55
	B	0.56	0.56	0.55
	C	5.1	5.1	5.1
Q509	E	1.49	1.54	1.54
	B	0.56	0.56	0.55
	C	5.1	5.1	5.1
Q510	E	1.58	1.58	1.62
	B	0.56	0.56	0.55
	C	5.1	5.1	5.1
Q511	E	1.63	1.6	1.63
	B	0.56	0.56	0.55
	C	5.1	5.1	5.1
Q512	E	1.7	1.7	1.65
	B	0.56	0.56	0.55
	C	5.1	5.1	5.1
Q513	E	0	0	0
	B	0.35	0.26	0.15
	C	1.22	1.57	2.04
Q514	E	0	0	0
	B	0.35	0.26	0.15
	C	2.53	1.2	0.86
Q515	E	0	0	0
	B	0.35	0.26	0.15
	C	1.92	1.62	1.63
Q516	E	0	0	0
	B	0.35	0.26	0.15
	C	3.15	1.97	2.05
Q517	E	0	0	0
	B	0.35	0.26	0.15
	C	3.15	2.07	3.11
Q518	E	0	0	0
	B	0.35	0.26	0.15
	C	2.28	1.58	2.25
Q519	E	0	0	0
	B	0.35	0.26	0.15
	C	2.7	2.2	1.82
Q520	E	0	0	0
	B	0.35	0.26	0.5
	C	2.34	2.25	2.2
Q521	E	2.83	3.4	2.83
	B	2.14	2.14	2.13
	C	0	0	0



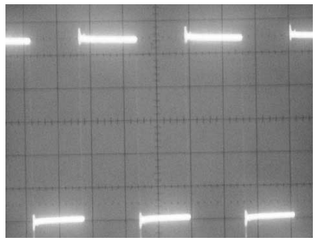
①IC501 PIN97 X : 1V DIV
CTL AMP OUT Y : 5uS DIV



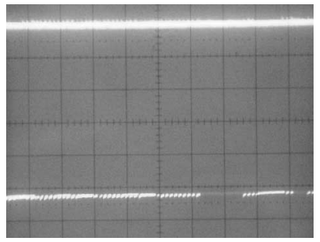
②IC501 PIN89 X : 1V DIV
DRUM FG Y : 0.5mS DIV



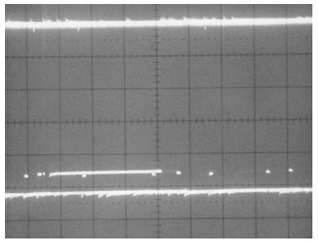
③IC501 PIN87 X : 1V DIV
CAPSTAN FG Y : 0.5mS DIV



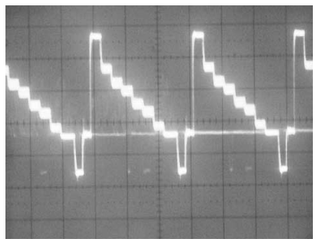
④IC501 PIN76 X : 1V DIV
CAPSTAN PWM Y : 5uS DIV



⑤IC501 PIN61 X : 1V DIV
SERIAL CLK Y : 0.1mS DIV

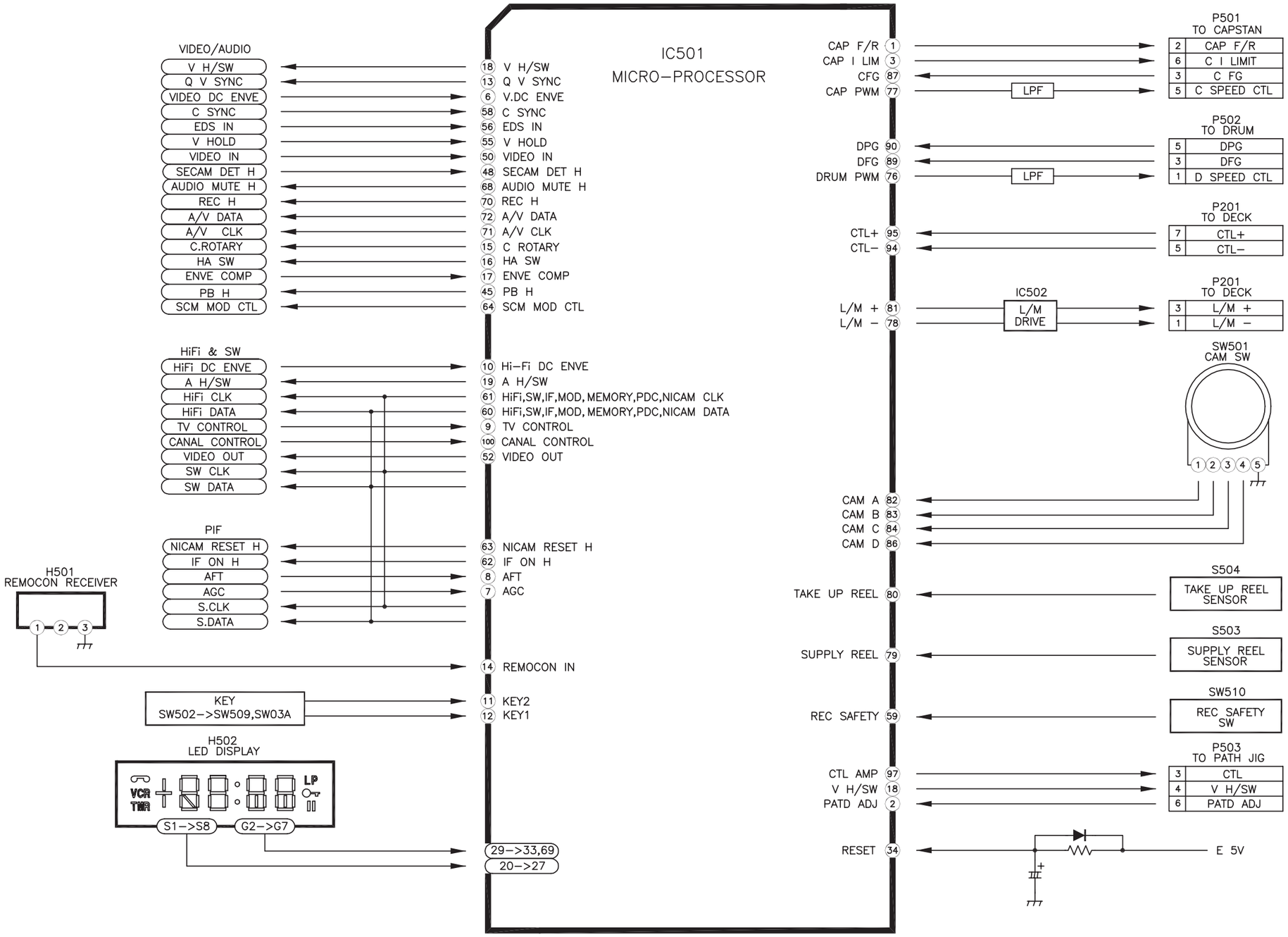


⑥IC501 PIN60 X : 1V DIV
SERIAL DATA Y : 0.1mS DIV

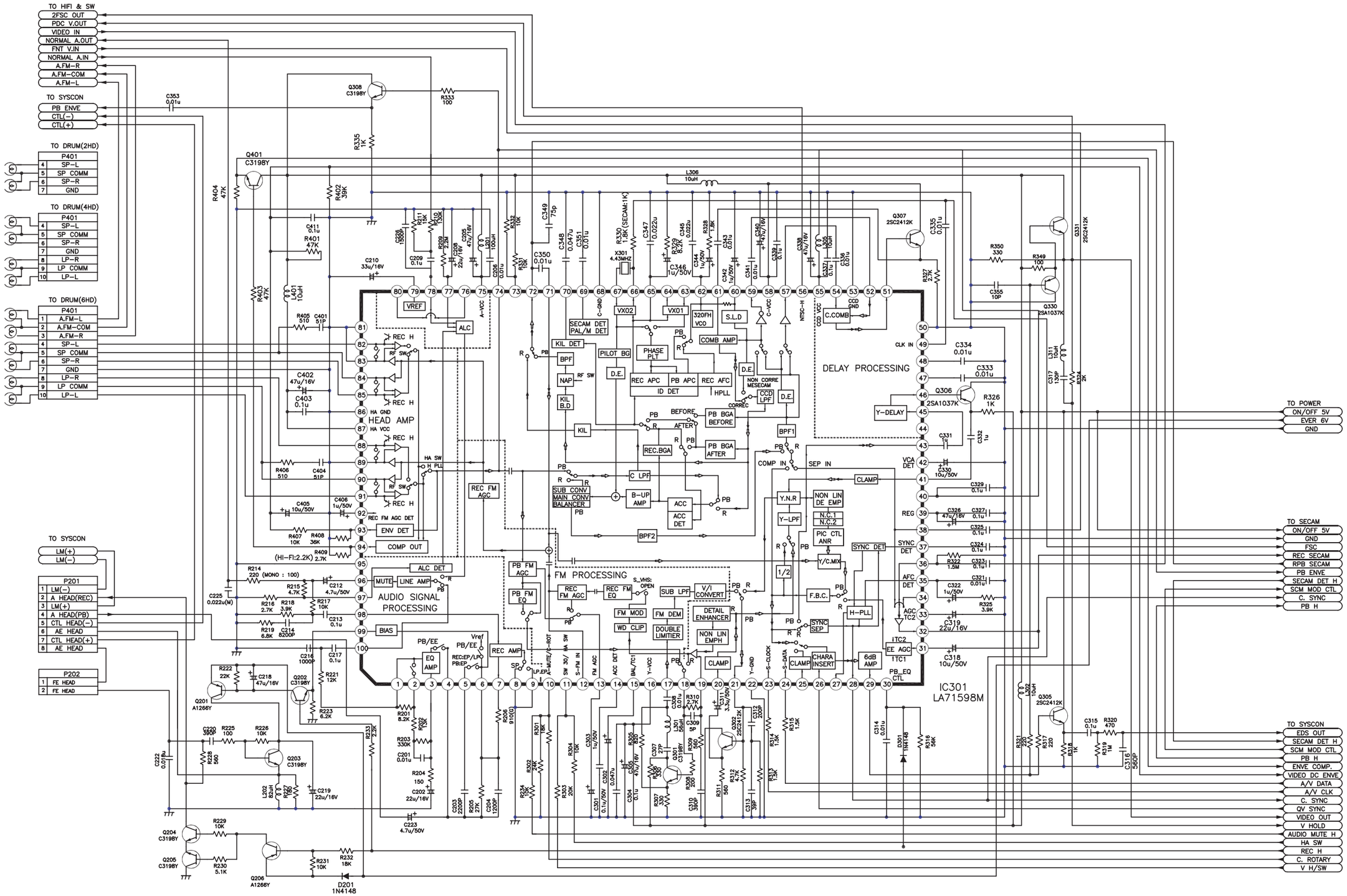


⑦IC501 PIN56 X : 0.5V DIV
EDS IN Y : 20uS DIV

SERVO & SYSCON BLOCK DIAGRAM



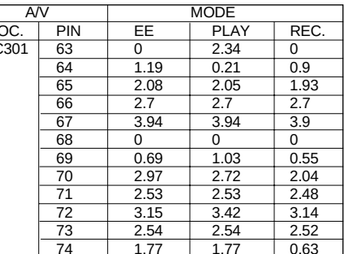
A/V CIRCUIT DIAGRAM



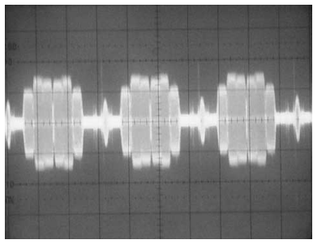
A/V		MODE		
LOC.	PIN	EE	PLAY	REC.
IC301	1	2.48	2.48	2.48
	2	2.48	2.48	2.48
	3	2.5	2.5	2.5
	4	2.5	2.5	2.38
	5	0.43	0.83	1.03
	6	2.51	2.51	2.36
	7	2.51	2.51	2.36
	8	0	0	0
	9	0	0	0
	10	4.18	0.88	0.86
	11	3.42	3.42	3.4
	12	2.63	5	2.62
	13	1.39	1.46	1.53
	14	1.38	1.21	1.35
	15	2.32	2.36	2.32
	16	5	5	5
	17	0.5	0.5	0.016
	18	2.33	1.98	2.33
	19	2.33	1.7	2.32
	20	2.94	3.07	2.93
	21	2.19	2.37	2.22
	22	0	0	0
	23	5	5	5
	24	4.96	0.14	5
	25	2.18	2.67	2.4
	26	5	0.03	5
	27	0.33	0.33	0.33
	28	0.6	0.02	0.6
	29	0.78	3	0.78
	30	1.05	1.05	4.57
	31	2.96	2.98	2.95
	32	2.44	2.2	2.44
	33	1.58	1.45	0
	34	2.44	3.38	2.33
	35	3.4	3.3	3.4
	36	2.42	1.79	2.4
	37	0.11	4.72	0.11
	38	1.8	1.87	1.79
	39	4.1	4.1	4.1
	40	5	5.09	5
	41	2.92	2.97	2.9
	42	2.84	3.14	2.8
	43	2.68	2.04	2.7
	44	0.08	4.3	0.1
	45	2.4	2.46	0
	46	1.5	1.55	1.49
	47	9.36	9.26	9.32
	48	1.97	1.99	1.98
	49	0.89	1.69	0.88
	50	0	0	0
	51	1.86	1.86	1.85
	52	2.7	2.7	2.7
	53	0	0	0
	54	2.7	2.7	2.7
	55	5	5	5
	56	0.57	0.57	0.57
	57	3.43	3.43	3.43
	58	0	5.07	5
	59	3.45	3.36	3.36
	60	4.3	3.32	4.1
	61	3.42	3.42	3.43
	62	4.03	3.33	4.03

A/V		MODE		
LOC.	PIN	EE	PLAY	REC.
IC301	63	0	2.34	0
	64	1.19	0.21	0.9
	65	2.08	2.05	1.93
	66	2.7	2.7	2.7
	67	3.94	3.94	3.9
	68	0	0	0
	69	0.69	1.03	0.55
	70	2.97	2.72	2.04
	71	2.53	2.53	2.48
	72	3.15	3.42	3.14
	73	2.54	2.54	2.52
	74	1.77	1.77	0.63
	75	5	5	5
	76	2.47	2.45	2.15
	77	0	0	0.4
	78	2.47	2.45	2.1
	79	2.5	2.5	2.5
	80	2.5	2.44	2.16
	81	0	0	0
	82	2	2	4.2
	83	0	0	0
	84	1.99	2	4.2
	85	1.99	2	4.2
	86	0	0	0
	87	5	5	5
	88	0.036	2	0.03
	89	0	0	0
	90	0.03	2	0.03
	91	0.03	2	0.03
	92	0.4	0.33	1.5
	93	0.79	2.08	0.62
	94	0	4.14	0.91
	95	0	0	0
	96	2.4	2.38	2.38
	97	0	0	0
	98	2.47	2.47	2.45
	99	0.81	0.81	4.4
	100	2.48	2.48	3.7

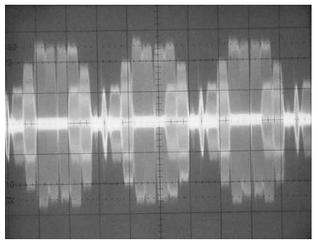
A/V		MODE		
LOC.	PIN	EE	PLAY	REC.
Q201	E	6	6	6
	B	5.89	5.92	5.05
	C	0.37	0.35	3.85
Q202	E	0.81	0.81	4.4
	B	0	0	5.04
	C	5.88	5.91	5.88
Q203	E	0	0	0.09
	B	0.37	0.35	-2.4
	C	0.37	0.33	3.8
Q204	E	0	0	-13.3
	B	0.68	0.69	-19.5
	C	0	0	-2.1
Q205	E	0	0	-13.3
	B	0.7	0.7	-19.1
	C	0	0	0
Q206	E	5.26	5.26	5.26
	B	4.62	4.65	-0.02
	C	5.23	5.26	-19.28
Q301	E	1.64	1.29	1.63
	B	2.32	1.97	2.32
	C	0	0	0
Q302	E	1.55	1.58	1.55
	B	2.2	4	2.2
	C	5	5	5
Q305	E	0.2	2.1	0.2
	B	0.78	0.78	0.78
	C	5	5	5
Q306	E	2.14	2.79	2.14
	B	1.48	1.49	1.49
	C	0	0	0
Q307	E	1.23	1.22	1.23
	B	0.58	0.57	0
	C	5	5	5
Q308	E	0	0	0
	B	1.8	1.8	0.13
	C	5	5	5
Q309	E	1.14	1.14	0
	B	1.75	1.75	0.13
	C	0	0	0
Q330	E	1.5	1.5	1.5
	B	0.81	2.6	0.81
	C	0	0	0
Q331	E	0.87	0.87	0.87
	B	1.51	3.2	1.51
	C	5	5	5
Q401	E	-0.05	1.72	0.45
	B	0	0	0
	C	5	5	5



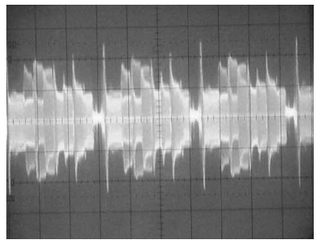
①IC301 PIN12 X : 0.1V DIV
RECY-FM Y : 10uS DIV



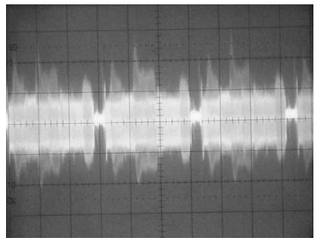
②IC301 PIN72 X : 0.1V DIV
REC COLOR(PAL) Y : 20uS DIV



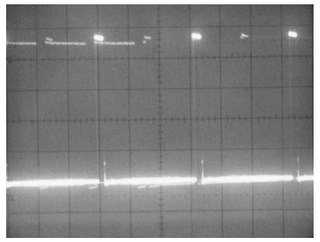
③IC301 PIN72 X : 0.1V DIV
PB COLOR(PAL) Y : 20uS DIV



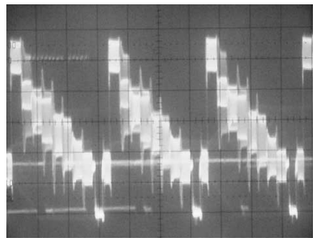
④IC301 PIN72 X : 0.1V DIV
PB COLOR(SCM) Y : 20uS DIV



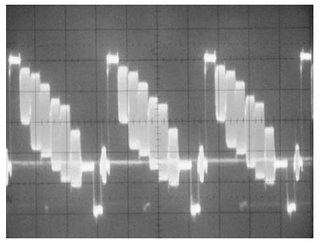
⑤IC301 PIN72 X : 0.1V DIV
PB COLOR(SCM) Y : 20uS DIV



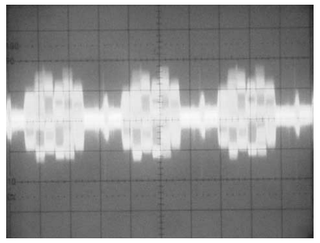
⑥IC301 PIN3 X : 1V DIV
C.SYNC Y : 20uS DIV



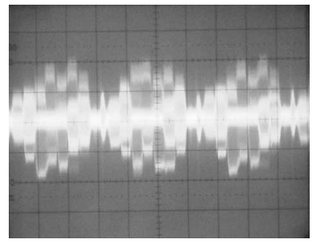
⑦IC301 PIN32 X : 0.2V DIV
REC SECAM Y : 20uS DIV



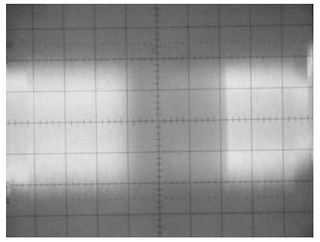
⑧IC301 PIN36 X : 0.2V DIV
VIDEO INPUT(REC) Y : 20uS DIV



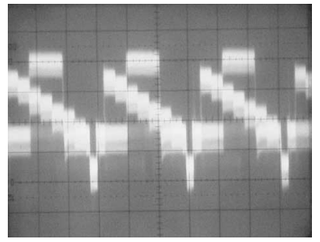
⑨IC301 PIN51 X : 0.1V DIV
COMB OUT(REC) Y : 20uS DIV



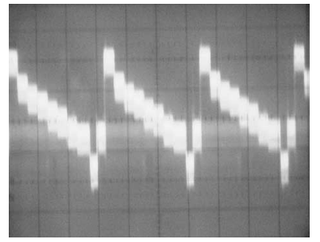
⑩IC301 PIN51 X : 0.1V DIV
COMB OUT(PB) Y : 20uS DIV



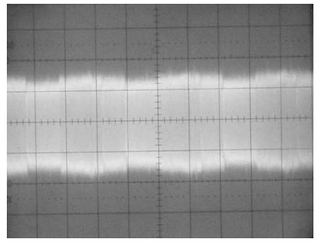
⑪IC301 PIN74 X : 0.1V DIV
PB ENVE Y : 2mS DIV



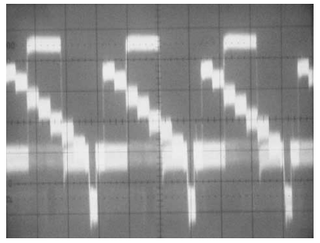
⑫IC301 PIN41 X : 0.1V DIV
Y-DLY OUT(PB) Y : 20uS DIV



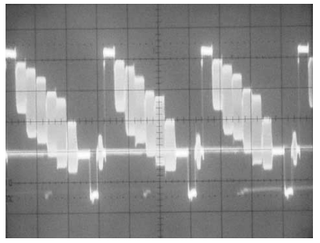
⑬IC301 PIN41 X : 0.1V DIV
Y-DLY OUT(REC) Y : 20uS DIV



⑭IC301 PIN18 X : 0.1V DIV
PB Y-FM Y : 20uS DIV

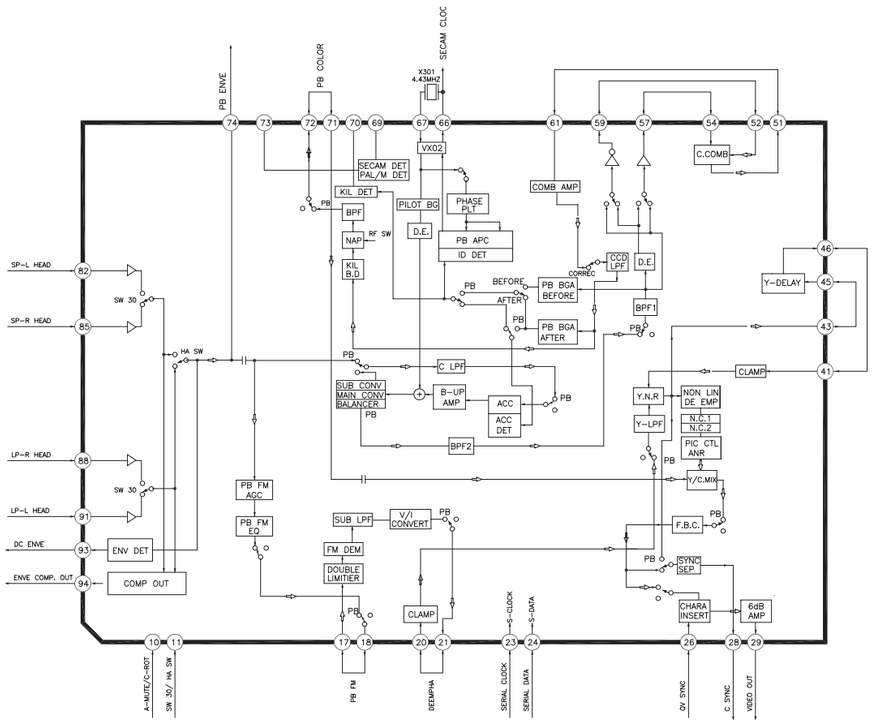


⑮IC301 PIN21 X : 0.1V DIV
DEEMPHA OUT(PB) Y : 20uS DIV

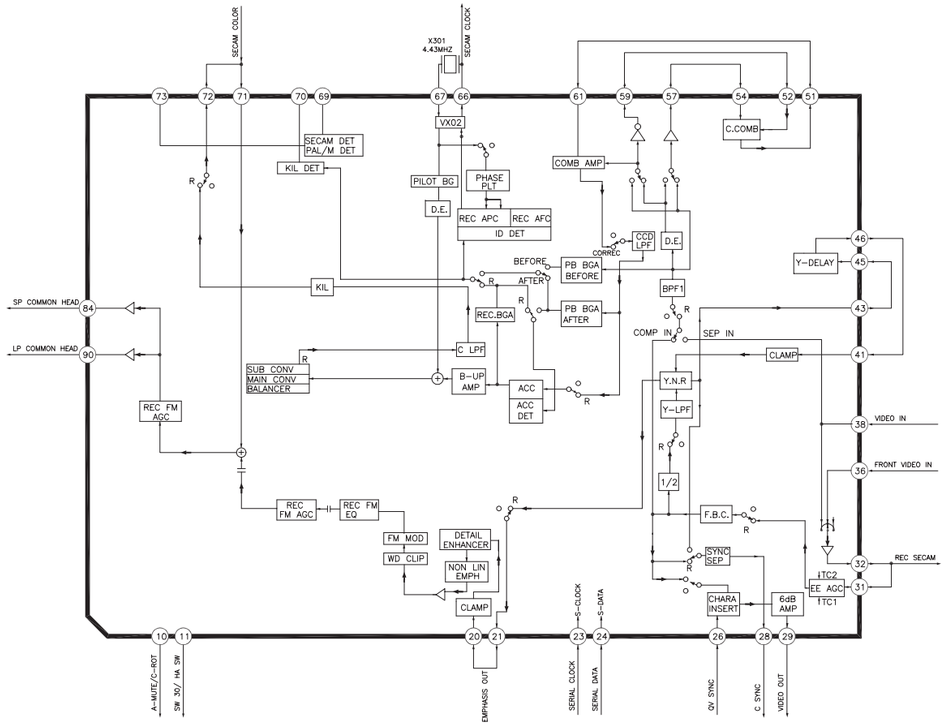


⑯IC301 PIN29 X : 0.5V DIV
VIDEO OUT (REC) Y : 20uS DIV

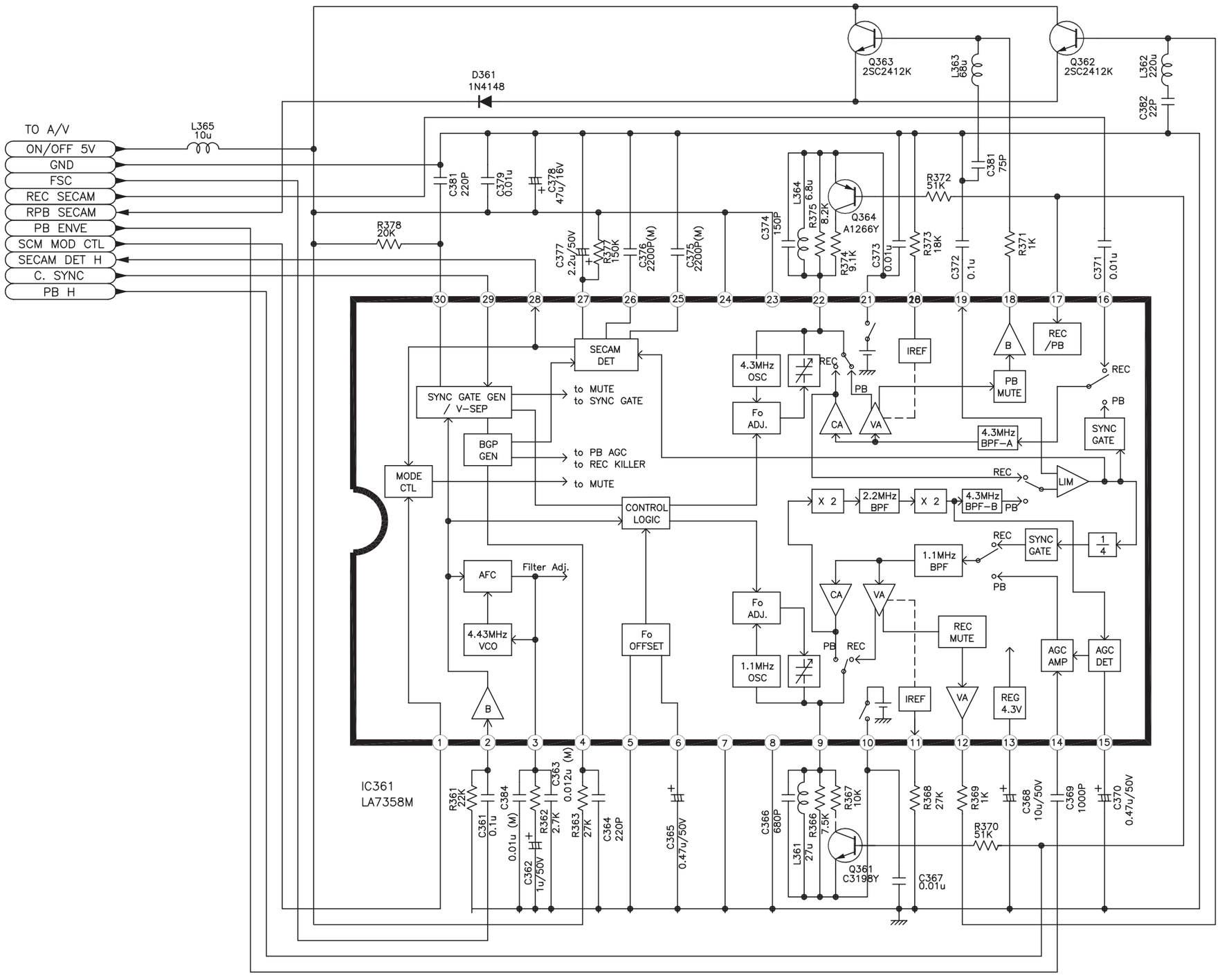
VIDEO PLAYBACK PATH FOR PAL



VIDEO RECORD PATH FOR PAL



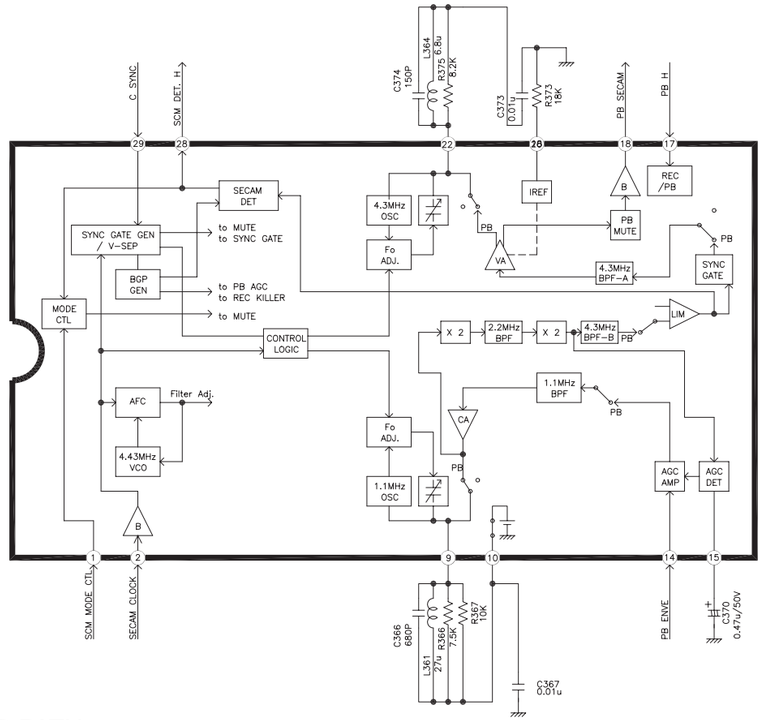
SECAM COLOR CIRCUIT DIAGRAM



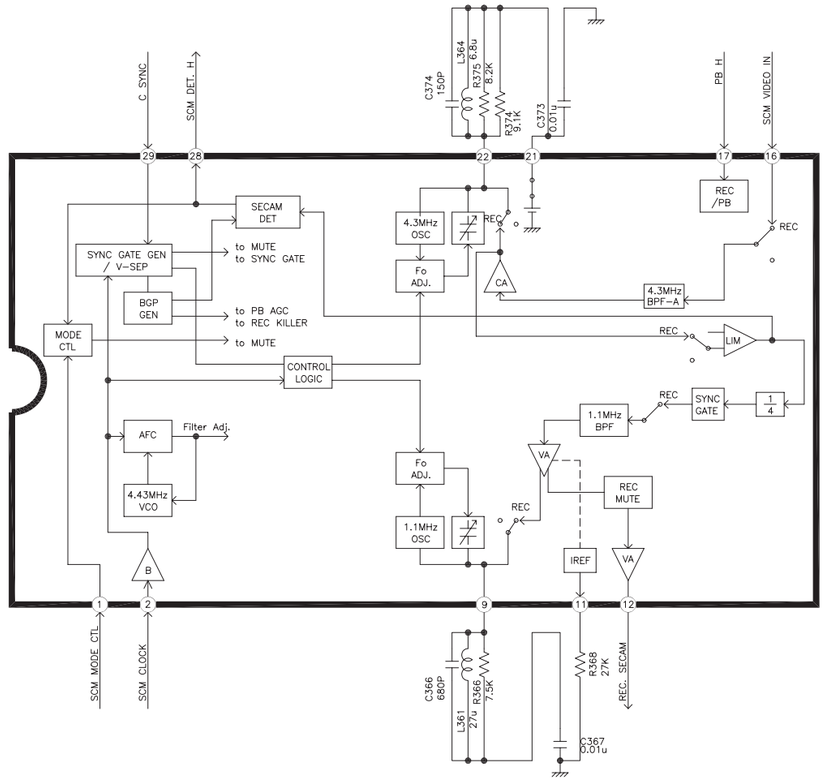
SECAM COLOR		MODE		
LOC.	PIN	EE	PLAY	REC.
IC361	1	2.54	2.5	2.5
	2	2	2	2
	3	3.54	4	4
	4	1.3	1.3	1.3
	5	0	0	0
	6	2.2	3	3
	7	0	0	0
	8	0	0	0
	9	2.52	2.6	2.6
	10	2.52	2.6	2.6
	11	2.33	2.4	2.4
	12	2.65	0	2.6
	13	4.29	4.4	4.4
	14	2.59	2.6	2.6
	15	3.02	2	3
	16	2.65	2.8	2.8
	17	0.04	5	0
	18	0	2.6	0
	19	2.1	2.1	2.1
	20	2.3	2.3	2.3
	21	2.57	2.6	2.6
	22	2.57	2.6	2.6
	23	5	5	5
	24	5	5	5
	25	2.5	3	3
	26	2.5	3	3
	27	2.85	2.8	4.5
	28	0.13	1	4.5
	29	0.6	0.6	0.6
	30	0.8	0.8	0.8

SECAM COLOR		MODE		
LOC.	PIN	EE	PLAY	REC.
Q361	E	2.52	2.55	2.52
	B	-0.03	-0.03	-0.03
	C	2.52	2.52	2.51
Q362	E	2.67	271	2.62
	B	2.64	2.64	2.63
	C	5	5	5
Q363	E	2.56	2.62	2.55
	B	1.57	2.69	1.57
	C	5	5	5
Q364	E	2.57	2.55	2.56
	B	1.99	1.99	1.99
	C	2.56	2.55	2.55

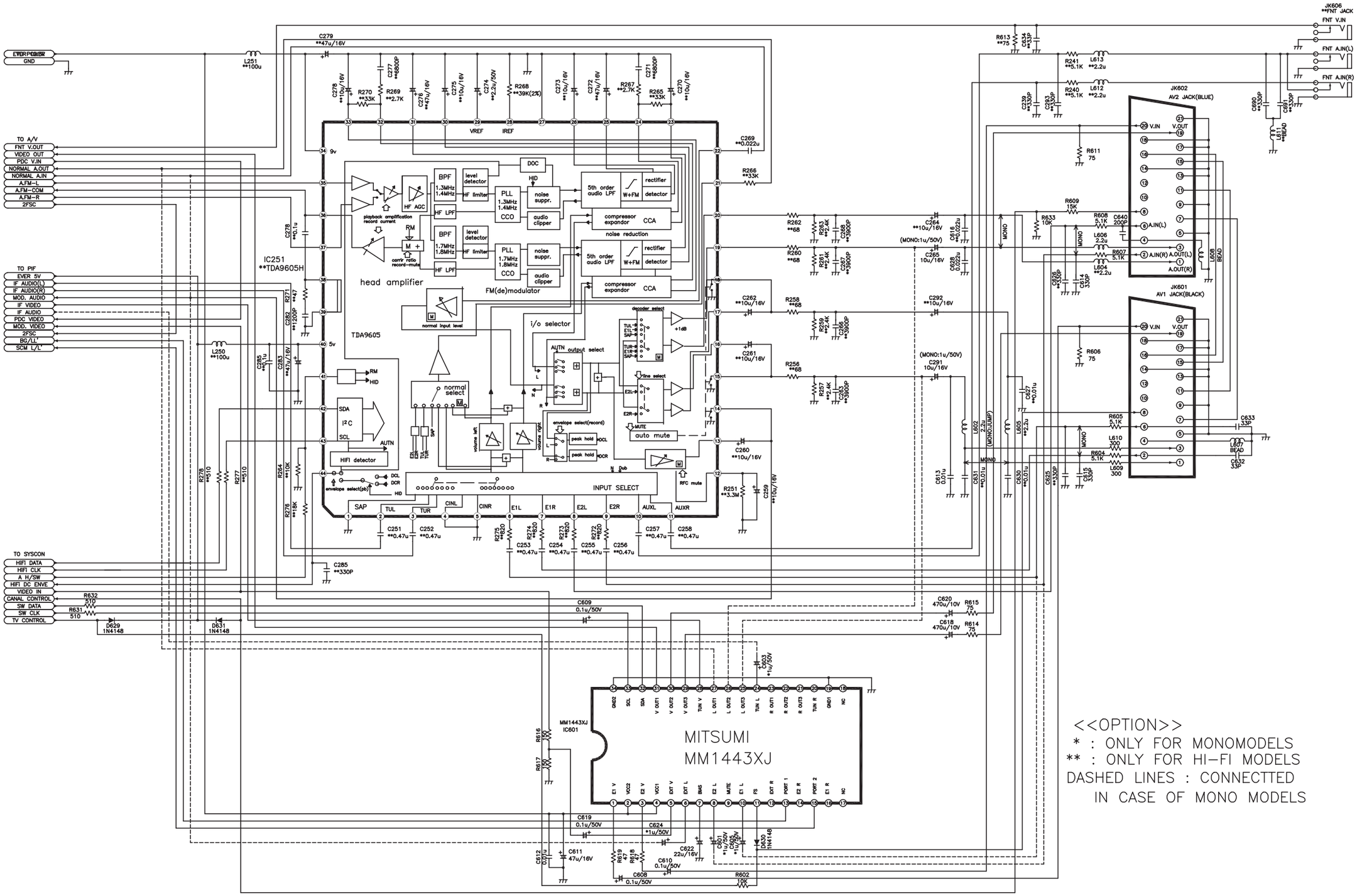
SECAM PLAYBACK PATH



SECAM RECORD PATH

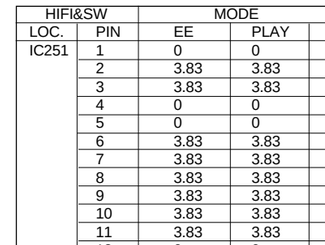


HIFI & SW CIRCUIT DIAGRAM

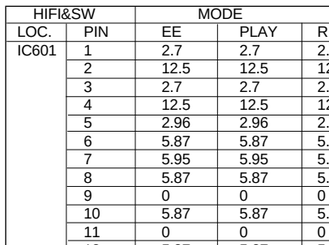


HIFI&SW		MODE		
LOC.	PIN	EE	PLAY	REC.
IC251	1	0	0	0
	2	3.83	3.83	3.83
	3	3.83	3.83	3.83
	4	0	0	0
	5	0	0	0
	6	3.83	3.83	3.83
	7	3.83	3.83	3.83
	8	3.83	3.83	3.83
	9	3.83	3.83	3.83
	10	3.83	3.83	3.83
	11	3.83	3.83	3.83
	12	0	0	0
	13	3.88	3.88	3.88
	14	0	0	0
	15	0	0	0
	16	4.58	4.58	4.58
	17	4.58	4.58	4.58
	18	0	0	0
	19	4.57	4.57	4.57
	20	4.57	4.57	4.57
	21	4.6	4.6	4.6
	22	3.83	3.83	3.83
	23	3.87	3.87	3.87
	24	3.88	3.88	3.88
	25	3.88	3.88	3.88
	26	0.81	0.81	0.81
	27	0	0	0
	28	3.84	3.84	3.84
	29	3.87	3.87	3.87
	30	0.81	0.81	0.81
	31	3.88	3.88	3.88
	32	3.88	3.88	3.88
	33	3.87	3.87	3.87
	34	12.4	12.4	12.4
	35	0.63	0.63	0.63
	36	0.63	0.63	0.63
	37	0.63	0.63	0.63
	38	0	0	0
	39	0	0	0
	40	5	5	5
	41	0.9	0.9	0.9
	42	4.6	4.6	4.6
	43	4.6	4.6	4.6
	44	0.12	1.83	0.12

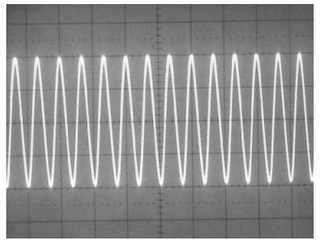
HIFI&SW		MODE		
LOC.	PIN	EE	PLAY	REC.
IC601	1	2.7	2.7	2.7
	2	12.5	12.5	12.5
	3	2.7	2.7	2.7
	4	12.5	12.5	12.5
	5	2.96	2.96	2.96
	6	5.87	5.87	5.87
	7	5.95	5.95	5.95
	8	5.87	5.87	5.87
	9	0	0	0
	10	5.87	5.87	5.87
	11	0	0	0
	12	5.87	5.87	5.87
	13	1.04	1.04	1.04
	14	5.87	5.87	5.87
	15	0.04	0.04	0.04
	16	5.87	5.87	5.87
	17	0	0	0
	18	0	0	0
	19	0	0	0
	20	5.87	5.87	5.87
	21	5.97	5.97	5.97
	22	5.98	5.98	5.98
	23	5.91	5.91	5.91
	24	5.87	5.87	5.87
	25	5.97	5.97	5.97
	26	5.97	5.97	5.97
	27	5.89	5.89	5.89
	28	0	0	0
	29	1.95	1.95	1.95
	30	1.47	1.47	1.47
	31	0	0	0
	32	4.65	4.65	4.65
	33	0	0	0
	34	0	0	0



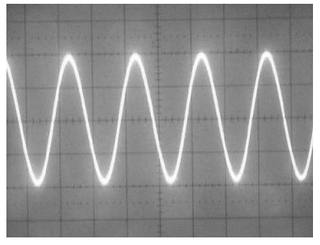
①IC251 PIN2 X : 0.1V DIV
IF A.IN LEFT Y : 0.5mS DIV



②IC251 PIN3 X : 0.5V DIV
IF A.IN RIGHT Y : 0.5mS DIV

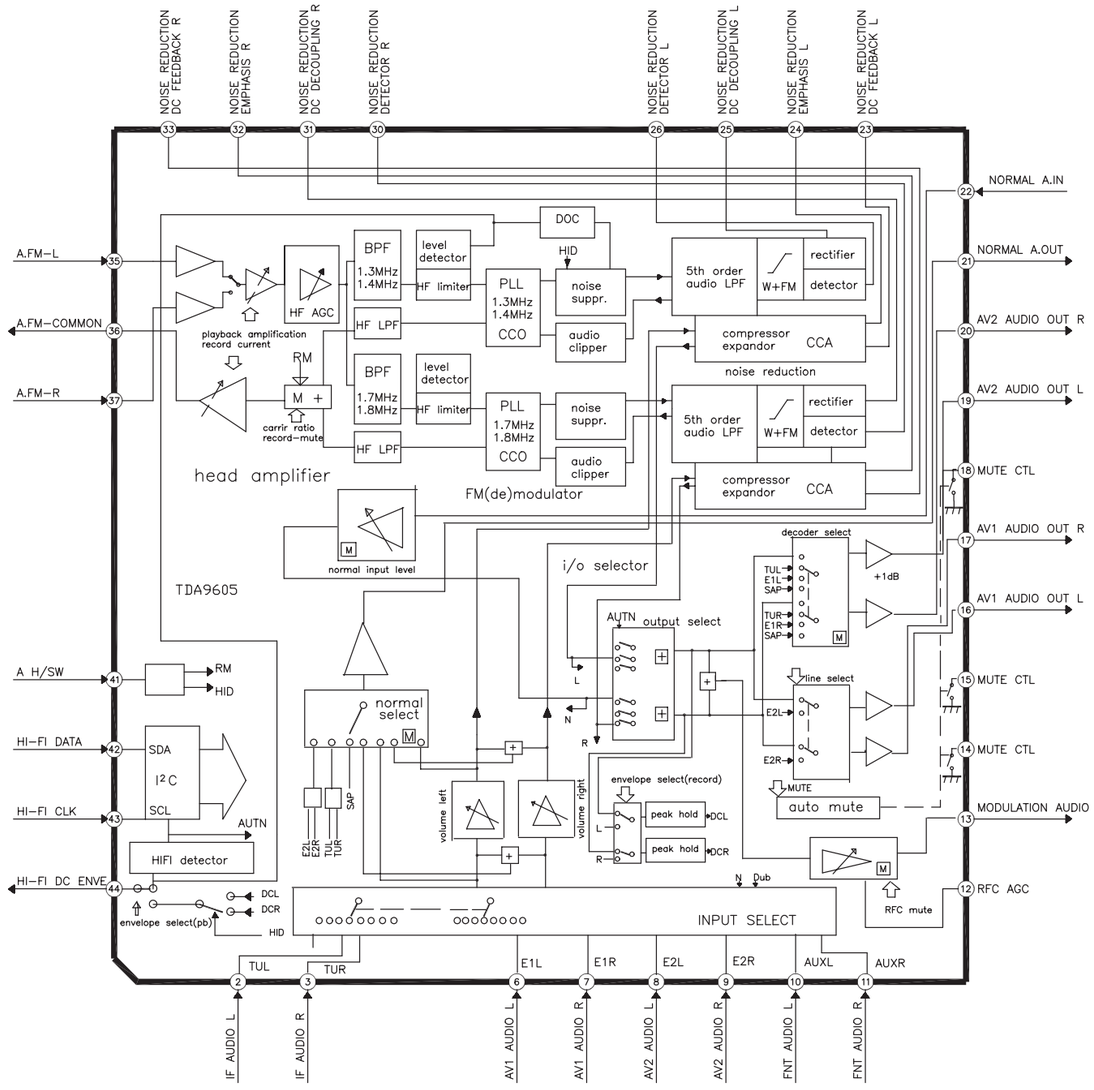


③IC251 PIN16 X : 0.5V DIV
A.OUT LEFT Y : 0.5mS DIV

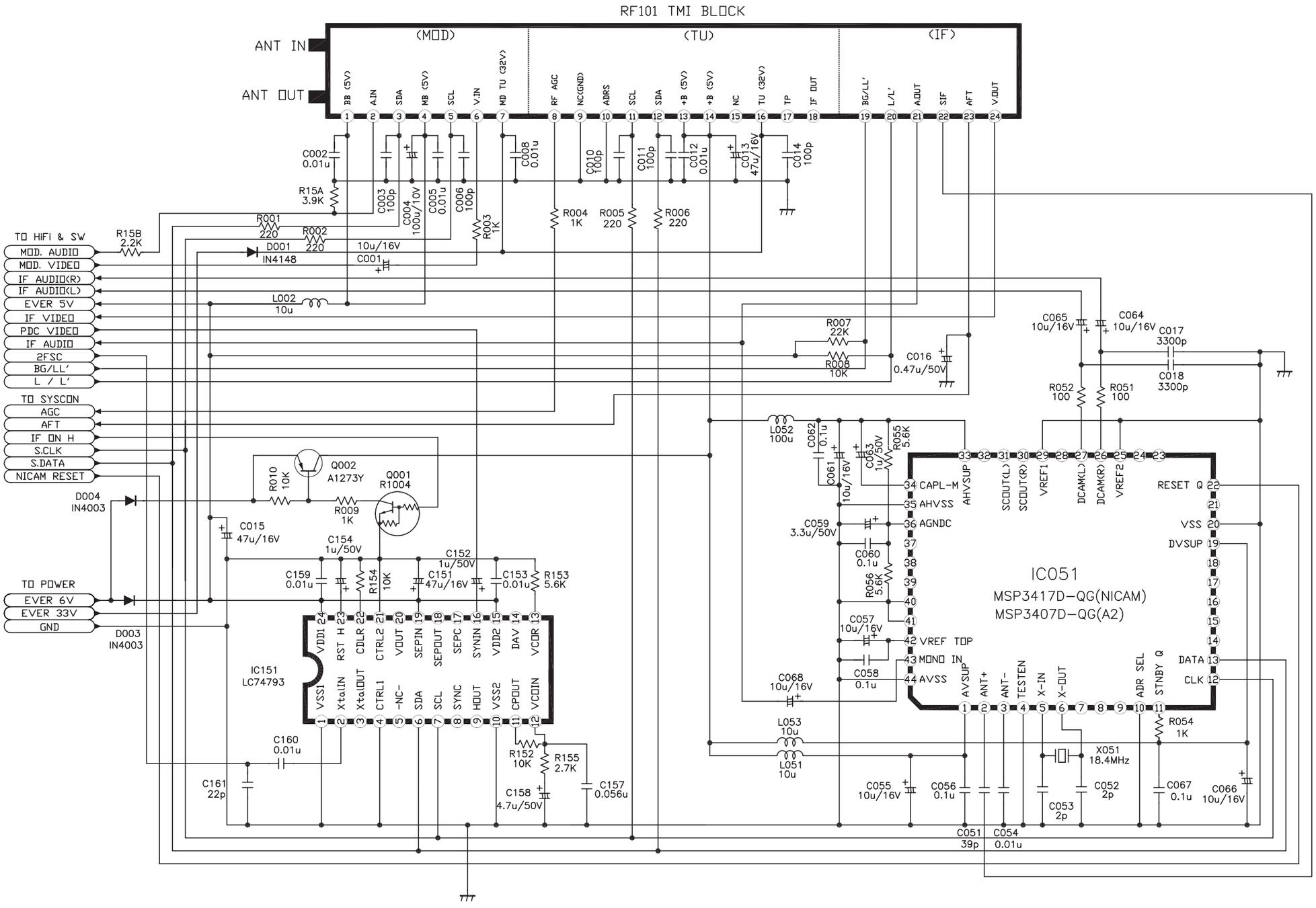


④IC251 PIN17 X : 0.5V DIV
A.OUT RIGHT Y : 0.5mS DIV

HIFI BLOCK DIAGRAM



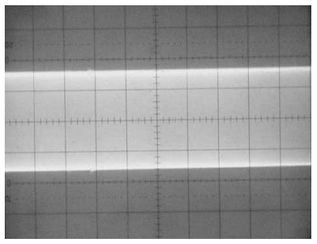
PIF CIRCUIT DIAGRAM



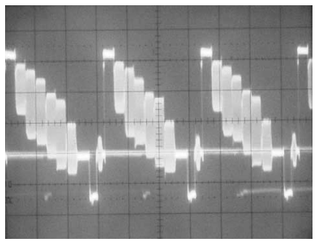
PIF		MODE		
LOC.	PIN	EE	PLAY	REC.
IC051	1	4.87	0	4.87
	2	4.92	0.05	4.92
	3	1.49	0	1.49
	4	0	0	0
	5	2.23	0.07	2.23
	6	2.21	0.06	2.21
	7	1.45	0.05	1.45
	8	1.54	0	1.54
	9	1.54	0.05	1.54
	10	0	0	0
	11	4.9	0	4.9
	12	4.67	4.6	4.67
	13	4.61	4.5	4.61
	14	1.31	0.03	1.31
	15	1.14	0.04	1.14
	16	1.26	0.04	1.26
	17	0.97	0.04	0.97
	18	0.86	0.04	0.86
	19	4.9	0	4.9
	20	0	0	0
	21	1.3	0.05	1.3
	22	5	0	5
	23	0	0	0
	24	0	0	0
	25	0	0	0
	26	1.31	0	1.31
	27	0.32	0	0.32
	28	0	0	0
	29	0	0	0
	30	2.45	0.05	2.45
	31	2.46	0.06	2.46
	32	0	0	0
	33	4.9	0	4.9
	34	3.37	0	3.37
	35	0	0	0
	36	2.46	0	2.46
	37	0	0	0
	38	0	0	0
	39	0	0	0
	40	0	0	0
	41	0	0	0
	42	2.6	0	2.6
	43	2.45	0.12	2.45
	44	0	0	0

PIF		MODE		
LOC.	PIN	EE	PLAY	REC.
IC151	1	0	0	0
	2	2.49	2.68	2.64
	3	2.51	2.72	2.68
	4	0	0	0
	5	0	0	0
	6	4.6	4.7	4.7
	7	4.7	4.9	4.9
	8	5	5	5
	9	4.7	4.74	0
	10	0	0	0
	11	1.63	2.74	1.63
	12	1.63	3.18	1.63
	13	0.57	1.17	0.56
	14	1.87	1.54	1.53
	15	5	5	5
	16	2.57	3.02	2.75
	17	2.55	2.57	2.55
	18	5	5	5
	19	5	5	5
	20	5	5	5
	21	0	0	0
	22	3.56	3.79	3.74
	23	5	5	5
	24	5	5	5

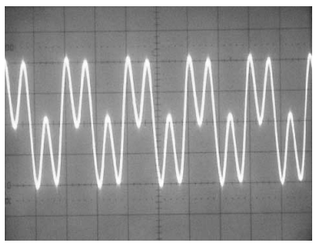
PIF		MODE		
LOC.	PIN	EE	PLAY	REC.
Q001	E	0	0	0
	B	5.1	0	5.1
	C	0	5.68	0
Q002	E	5.06	5.06	5.06
	B	4.31	5.68	4.3
	C	4.95	0	4.92



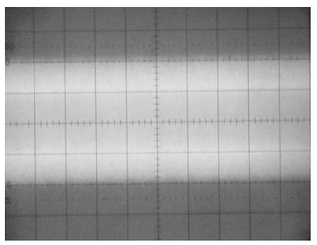
①IC151 PIN2 X : 0.5V DIV
2FSC IN Y : 2uS DIV



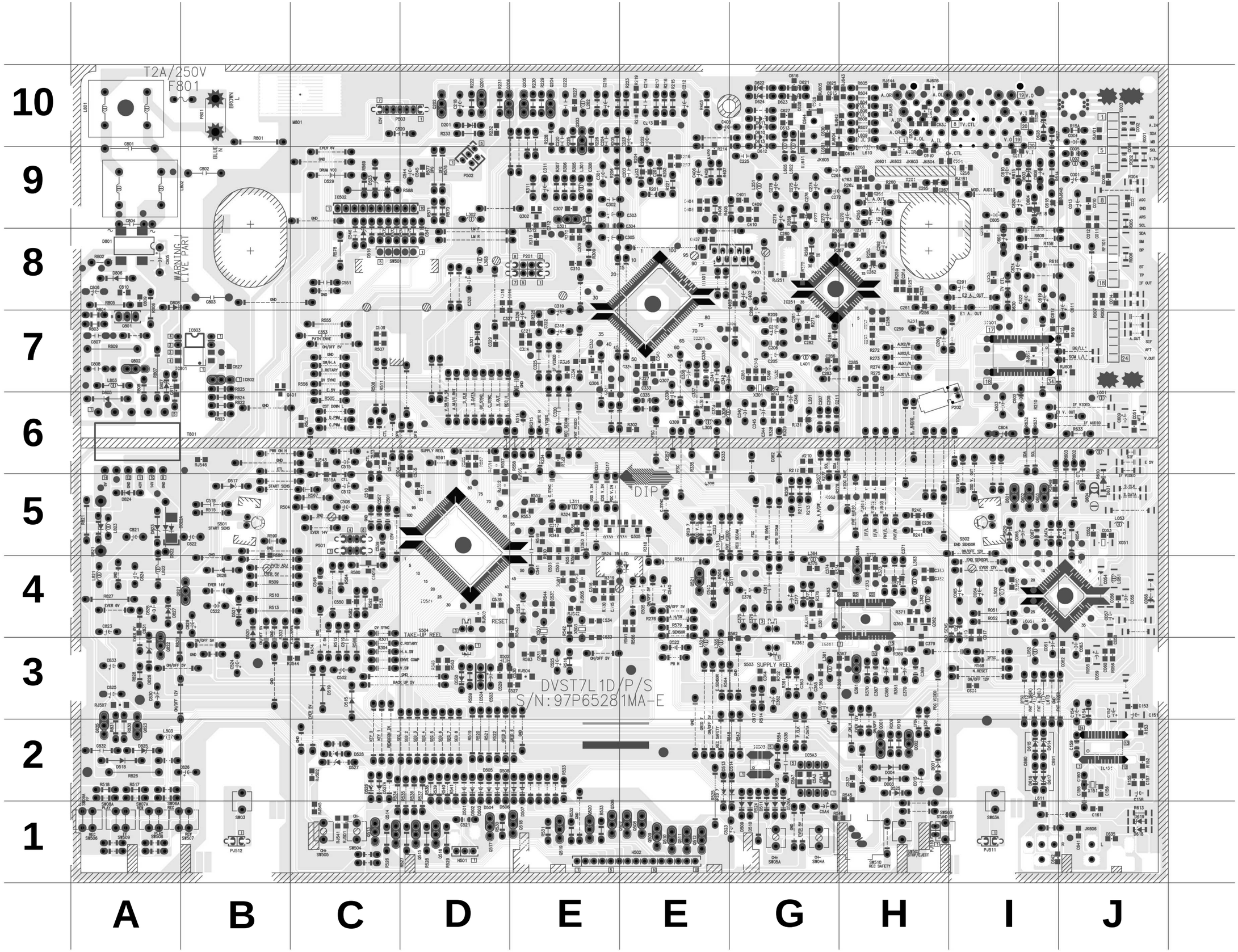
②IC151 PIN16 X : 0.5V DIV
PDC V.IN Y : 20uS DIV

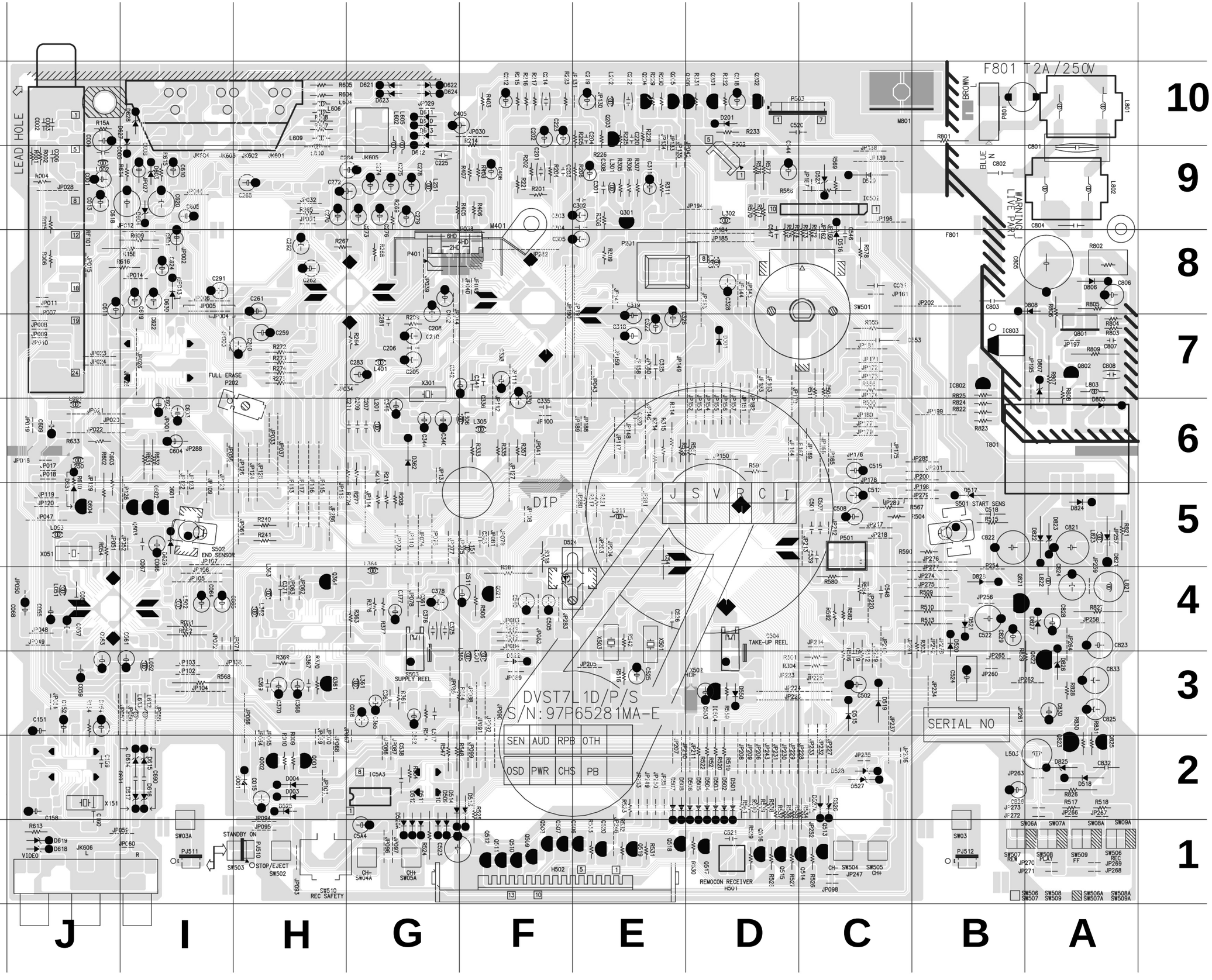


③IC051 PIN43 X : 0.2V DIV
MONO IN Y : 0.5mS DIV



④IC051 PIN2 X : 0.1V DIV
SIF IN Y : 0.5mS DIV


T2A/250V
F801
WARNING
LIVE PART
DVST7L1D/P/S
S/N:97P65281MA-E
DIP
TAKE-UP REEL
SUPPLY REEL
RESET
10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
E
G
H
I
J


LEAD HOLE
F801 T2A/250V
BROWN
BLUE
WARNING LIVE PART
DIP
J S V R C I
DVST7L1D/P/S
S/N:97P65281MA-E
SEN AUD RPB OTH
OSD PWR CHS PB
SERIAL NO
FULL ERASE
P202
S502 END SENSOR
S503 SUPPLY REEL
S504 TAKE-UP REEL
S501 START SENS
REMOCON RECEIVER
H501
STANDBY ON
STOP/EJECT
SW502
SW503
REC SAFETY
SW510
VIDEO
JK606
SW03A
SW03
PJ511
PJ512
CH- SW04A
CH+ SW05A
CH- SW504
CH+ SW505
SW06A SW07A SW08A SW09A
SW507 REW
SW508 PLAY
SW509 FF
SW506 REC
SW506 SW507
SW508 SW509
SW506A SW507A
SW508A SW509A
M401
M801
P201
P401
P501
P503
P801
SW501
T801
IC502
IC803
IC5A3
H502
X051
X151
X301
X501
X503
L401
L801
L802
L803
L804
L805
L806
L609
Q301
Q801
Q802
Q821
D201
D524
D529
D801
D807
D808
D824
C801
C802
C804
C805
C806
C807
C808
C821
C822
C823
C825
C832
R802
R805
R809
R821
R822
R823
R824
R825
10
9
8
7
6
5
4
3
2
1
J
I
H
G
F
E
D
C
B
A

COMPONENTS LOCATION

C001		J 9
C002		J 10
C003		J 10
C004		J 10
C005		J 9
C006		J 9
C007	*	J 9
C008	*	J 9
C010	*	J 9
C011	*	J 9
C012	*	J 9
C013		J 9
C014	*	J 8
C015		H 2
C016		G 3
C017	*	I 4
C018	*	I 4
C051	*	J 6
C052	*	J 5
C053	*	J 5
C054		J 4
C055		J 4
C056	*	J 4
C057		J 4
C058	*	J 3
C059		J 3
C060	*	J 3
C061		I 3
C062	*	J 3
C063		J 3
C064		I 4
C065		I 4
C066		I 5
C067		I 5
C068		J 4
C151		J 3
C152		J 3
C153	*	J 3
C154		J 3
C155	*	J 2
C156	*	J 2
C157	*	J 2
C158		J 2
C159		J 2
C160		J 2
C161	*	J 1
C201		F 9
C202		F 10
C203		F 9
C204		E 10
C205		G 7
C206		G 7
C207		G 6
C208		G 8
C209		G 6
C210		G 7
C211		G 6
C212		F 10
C213	*	F 10
C214		F 10
C216	*	F 9
C217	*	F 9
C218		D 10
C219		E 10
C220		E 10
C222		E 10
C223		F 10
C225		G 9
C239	*	H 5
C251	*	H 7
C252	*	H 7
C253	*	I 8
C254	*	H 9
C255	*	I 8
C256	*	I 9
C257	*	H 7
C258	*	H 7
C259		H 7
C260		H 7
C261		H 8

C262		H 8
C263	*	H 8
C264		G 9
C265		H 9
C266	*	H 8
C267	*	H 9
C268	*	H 9
C269	*	H 9
C270		H 9
C271	*	H 8
C272		G 9
C273		G 9
C274		G 9
C275		G 9
C276		G 9
C277	*	G 9
C278		G 9
C279		G 9
C280	*	G 8
C281		G 7
C282	*	G 7
C283		G 7
C285	*	H 7
C286	*	G 7
C291		I 8
C292		H 8
C293	*	H 7
C301		E 9
C302		E 9
C303		E 9
C304		E 9
C305		E 8
C307	*	E 9
C308		E 9
C309	*	E 8
C310	*	E 8
C311		E 9
C312	*	E 8
C314	*	D 8
C315	*	E 4
C316	*	E 4
C317	*	E 5
C318		E 7
C319		E 7
C320		E 6
C321	*	E 7
C322		E 7
C323		F 5
C324	*	E 7
C325		E 7
C326		E 7
C327	*	D 7
C328		D 8
C329	*	D 7
C330		F 6
C331	*	E 7
C332	*	E 7
C333	*	F 7
C334	*	F 7
C335		F 6
C336		F 7
C337	*	F 7
C338		F 7
C339	*	F 6
C340		G 6
C341		F 7
C342		F 7
C343	*	F 7
C344		G 6
C345	*	G 6
C346		G 6
C347	*	G 6
C348	*	G 7
C349	*	G 7
C350	*	G 7
C351	*	G 7
C353		C 7
C355	*	E 5
C361		G 4
C362		G 3
C363		G 3
C364	*	G 3
C365		G 3
C366	*	G 3

C367		H 3
C368		H 3
C369		H 3
C370		H 3
C371		H 4
C372	*	H 4
C373	*	H 4
C374	*	G 4
C375		G 4
C376		G 4
C377		G 4
C378		G 4
C379	*	H 3
C381	*	G 4
C382	*	H 4
C383	*	H 4
C401	*	G 9
C402		G 8
C403	*	G 8
C404	*	F 9
C405		F 10
C406		F 9
C407	*	F 8
C408	*	F 9
C409	*	G 9
C410	*	G 9
C501		C 5
C501A	*	C 4
C502		C 3
C503		D 3
C504	*	D 6
C505		F 4
C506	*	E 5
C507		C 5
C508		C 5
C509	*	C 7
C510	*	C 5
C511		F 4
C512		C 5
C513	*	C 6
C514	*	D 5
C515		C 6
C516	*	C 6
C517		G 3
C518		B 5
C519		C 3
C520		D 10
C521		D 1
C522		B 4
C523		G 1
C524		B 3
C525		E 3
C526		E 4
C527	*	E 3
C528	*	D 4
C529	*	D 3
C530	*	D 3
C531	*	E 3
C532	*	E 4
C533	*	E 3
C534	*	E 4
C535	*	D 6
C536	*	E 5
C537	*	H 2
C538		G 2
C539		C 5
C540		F 4
C541		E 5
C542	*	E 4
C543	*	F 4
C544		D 9
C545	*	D 9
C546		C 8
C547		D 8
C548		C 4
C550	*	C 4
C551		C 8
C5A1	*	G 2
C5A2	*	G 2
C5A3	*	G 2
C5A4		G 1
C601		I 8
C602		I 6
C603		I 6

C604		I 6
C605		I 9
C608		I 9
C609		J 6
C610		I 9
C611		J 8
C612	*	I 7
C613	*	G 10
C614	*	G 9
C615	*	G 10
C616	*	G 10
C618		I 9
C619		I 8
C620		I 9
C622		I 8
C624		I 8
C625	*	G 10
C626	*	G 10
C627	*	G 10
C628	*	G 10
C630	*	G 10
C631	*	G 9
C632	*	H 10
C633	*	H 10
C634	*	I 3
C635	*	J 1
C640	*	H 9
C641	*	J 1
C642	*	I 1
C644	*	G 10
C690		I 2
C691		I 2
C801		A 9
C802		B 9
C803		B 8
C804		A 9
C805		A 8
C806		A 8
C807		A 7
C808		A 7
C809	*	A 8
C810	*	A 8
C811	*	A 7
C821		A 5
C822		B 5
C823		A 4
C824		A 4
C825		A 3
C826		B 2
C827	*	B 7
C828		A 4
C829		B 4
C830		A 3
C831	*	A 4
C832		A 2
C833		A 3

L365		F 3
L401		G 7
L501		F 3
L502		I 4
L503		A 2
L602		G 10
L604		H 10
L605		G 10
L606		H 10
L607	*	H 10
L608	*	H 9
L609		H 10
L610		H 9
L611	*	I 1
L612		I 3
L613		I 3
L801		A 10
L802		A 9
L803		A 7
L821		A 4
L822		A 4
L823		A 5

P201		D 8
P202		H 6
P401		G 8
P501		C 5
P502		D 9
P503		D 10
P801		B 10
PJ510		H 1
PJ511		I 1
PJ512		B 1

D001		H 2
D003		H 2
D004		H 2
D201		D 10
D301		D 7
D362		G 6
D501		D 2
D502		D 2
D503		D 2
D504		D 2
D505		D 2
D506		D 2
D507		E 2
D508		E 2
D509		G 1
D510		G 1
D511		G 1
D512		G 1
D513		F 2
D514		G 2
D515		C 3
D516		C 8
D517		B 5
D518		A 2
D519		C 3
D520		B 4
D521		B 4
D522		F 3
D523		C 9
D524		E 4
D525		H 2
D526		C 2
D526A		G 1
D527		C 2
D527A		C 2
D528		C 2
D529		C 9
D550		D 3
D603		I 9

L001		J 6
L002		J 9
L051		J 4
L052		I 3
L053		J 5
L151		F 5
L201		G 6
L202		E 10
L250		J 6
L251		G 9
L301		E 9
L302		D 9
L303		D 8
L305		F 6
L306		F 6
L311		E 5
L361		G 3
L362		H 4
L363		H 4
L364		G 4

D604		I 9
D610		G 10
D611		G 10
D612		G 10
D613		G 10
D614		I 2
D615		I 2
D616		I 2
D617		I 2
D618		J 1
D619		J 1
D621		G 10
D622		G 10
D623		G 10
D624		G 10
D627		I 10
D628		I 10
D629		I 5
D630		I 8
D631		J 5
D801	*	A 8
D805		A 6
D806		A 8
D807		A 7
D808		A 8
D821		A 5
D822		A 5
D822A	*	A 5
D823		A 5
D824		A 5
D825		A 2
D826		A 3
D827		A 4
D828		B 4
F801		B 10

H501		D 1
H502		E 1
JK601		H 10
JK606		J 1
M801		C 10
RF101		J 10
S503		G 3
S504		D 3
T801		A 6

IC051	*	J 4
IC151	*	J 2
IC251	*	G 8
IC301	*	F 8
IC361	*	H 4
IC501	*	D 5
IC502		C 9
IC503	*	G 2
IC504		D 3
IC5A3		G 2
IC601	*	I 7
IC801	*	B 7
IC802		B 7
IC803		B 7

JP001		I 6
JP002		I 8
JP003		I 7
JP004		I 8
JP005		I 8
JP006		I 8
JP007		J 8
JP008		J 7

* SOLDER SID - COT CUIVRE - C SEITE - LATO SALDATURE - LADO DEL COBRE

JP009		J 7
JP010		J 7
JP011		J 8
JP012		I 8
JP013		I 8
JP014		I 8
JP015		J 8
JP016		J 6
JP017		J 6
JP018		J 6
JP019		J 6
JP020		J 6
JP021		J 6
JP022		J 6
JP023		J 7
JP024		J 7
JP025		I 7
JP026		I 7
JP027		I 9
JP028		J 9
JP029		G 10
JP030		F 10
JP031		H 9
JP032		H 9
JP033		H 6
JP034		G 7
JP037		H 6
JP038		F 8
JP039		G 8
JP040		F 8
JP041		F 6
JP042		E 9
JP043		E 7
JP044		G 7
JP045		F 8
JP046		I 9
JP047		J 5
JP048		J 4
JP049		J 4
JP050		J 4
JP051		J 5
JP052		I 5
JP054		J 3
JP055		I 3
JP056		I 3
JP057		J 3
JP058		I 6
JP059		I 1
JP060		I 1
JP061		H 5
JP062		H 4
JP063		H 4
JP064		H 2
JP065		H 2
JP066		H 3
JP067		G 2
JP068		H 2
JP069		H 2
JP070		H 2
JP071		I 4
JP072		I 4
JP073		G 5
JP074		G 5
JP075		G 5
JP076		G 5
JP077		G 5
JP078		G 4
JP079		F 5
JP080		E 7
JP081		F 5
JP082		F 4
JP083		F 4
JP084		F 4
JP085		G 3
JP086		G 2
JP087		G 2
JP088		F 3
JP089		F 3
JP090		F 2
JP091		F 3
JP092		F 3
JP093		H 1
JP094		H 1
JP095		H 1
JP096		G 1
JP097		G 1

JP098		C 1
JP099		F 2
JP100		F 6
JP101		H 2
JP102		I 3
JP103		I 3
JP104		I 3
JP105		I 4
JP106		I 4
JP107		I 5
JP108		F 5
JP109		I 5
JP111		F 7
JP112		F 7
JP113		H 5
JP114		G 5
JP115		H 5
JP116		H 5
JP117		H 5
JP118		H 5
JP119		J 5
JP120		J 5
JP121		I 5
JP122		I 5
JP123		I 5
JP124		H 6
JP125		H 6
JP126		H 6
JP127		F 6
JP128		I 5
JP129		J 5
JP130		E 10
JP131		E 10
JP132		G 6
JP133		E 10
JP134		E 10
JP135		E 9
JP136		H 3
JP138		C 9
JP139		C 9
JP140		G 5
JP141		E 8
JP143		D 8
JP144		D 8
JP145		D 8
JP146		E 6
JP147		E 6
JP148		E 6
JP149		E 7
JP150		D 6
JP151		D 6
JP152		D 6
JP153		D 6
JP154		D 6
JP155		D 6
JP156		D 6
JP157		D 6
JP158		E 7
JP159		E 7
JP160		C 8
JP161		C 8
JP162		C 8
JP163		D 7
JP164		D 6
JP165		C 6
JP166		C 6
JP167		D 6
JP169		C 6
JP170		D 7
JP171		C 7
JP172		C 7
JP173		C 7
JP174		C 6
JP175		C 6
JP176		C 6
JP177		C 6
JP178		C 5
JP179		C 6
JP180		C 6
JP181		C 7
JP182		D 6
JP183		D 7
JP184		D 8
JP185		D 8
JP187		C 9
JP188		E 6

JP189		E 6
JP190		F 8
JP191		E 8
JP194		D 9
JP195		A 7
JP196		C 9
JP197		A 7
JP198		B 5
JP199		B 6
JP200		B 6
JP201		B 6
JP202		B 8
JP203		E 5
JP204		E 5
JP205		E 3
JP206		D 2
JP207		E 2
JP208		D 2
JP209		D 2
JP210		E 2
JP211		D 2
JP212		C 5
JP213		C 5
JP214		C 4
JP217		C 5
JP218		C 5
JP220		C 4
JP223		C 3
JP224		D 3
JP225		D 3
JP226		C 3
JP227		C 2
JP228		D 2
JP229		D 2
JP230		D 2
JP231		D 2
JP232		C 2
JP233		C 2
JP234		B 3
JP235		C 2
JP236		C 2
JP237		C 3
JP239		C 3
JP240		C 4
JP241		C 4
JP242		B 4
JP243		D 2
JP246		E 1
JP247		C 1
JP249		E 2
JP250		E 2
JP251		E 2
JP252		C 2
JP253		E 2
JP254		B 4
JP256		B 4
JP257		A 5
JP258		A 4
JP259		A 4
JP260		B 3
JP261		A 3
JP262		A 3
JP263		A 2
JP264		A 4
JP265		B 3
JP266		A 2
JP267		A 2
JP268		A 1
JP269		A 1
JP270		A 1
JP271		A 1
JP272		A 2
JP273		A 2
JP274		B 4
JP275		B 4
JP276		B 5
JP277		B 4
JP278		B 4
JP279		B 5
JP280		E 5
JP281		E 5
JP282		F 8
JP283		F 4
JP285		B 6
JP286		H 5
JP288		I 6

JP289		C 5

R001		J 9
R002		J 9
R003		J 9
R004		J 9
R005		J 9
R006		J 8
R007		J 8
R008		J 8
R009		H 2
R010		H 2
R051		I 4
R052		I 4
R054		J 5
R055		J 3
R056		J 3
R152		J 2
R153		J 2
R154		J 3
R155		J 2
R15A		J 10
R15B		I 8
R201		F 9
R202		F 9
R203		F 9
R204		F 9
R205		E 10
R206		E 9
R207		G 5
R208		G 5
R209		G 7
R210		G 6
R211		G 5
R212		G 6
R213		G 5
R214		F 10
R215		F 10
R216		F 10
R217		F 10
R218		F 10
R219		F 10
R221		F 9
R222		D 10
R223		F 10
R225		E 10
R226		E 10
R227		E 10
R228		E 10
R229		E 10
R230		E 10
R231		D 10
R232		D 10
R233		D 10
R234		E 6
R240		H 5
R241		H 5
R251		H 7
R256		H 8
R257		H 8
R258		H 8
R259		H 8
R260		H 9
R261		H 9
R262		H 9
R263		H 9
R264		G 7
R265		H 9
R266		G 8
R267		H 8
R268		G 8
R269		G 9
R270		G 8
R271		G 7
R272		H 7
R273		H 7
R274		H 7
R275		H 7
R276		F 4
R277		G 6

R278		G 6
R301		C 3
R302		F 6
R303		B 4
R304		C 3
R305		E 9
R306		E 9
R307		E 9
R308		E 9
R309		E 8
R310		E 8
R311		E 9
R312		E 9
R313		E 8
R314		E 6
R315		E 6
R316		D 8
R317		E 5
R318		F 5
R319		E 4
R320		E 4
R321		E 5
R322		E 6
R324		E 5
R325		E 7
R326		E 7
R327		F 7
R328		G 6
R329		G 6
R330		G 6
R331		G 6
R332		G 7
R333		F 6
R334		E 7
R335		F 6
R349		E 5
R350		E 5
R357		F 6
R361		G 3
R362		G 3
R363		G 4
R366		G 3
R367		H 3
R368		H 3
R369		H 3
R370		H 3
R371		H 4
R372		H 4
R373		H 4
R374		H 4
R375		G 4
R376		G 4
R377		G 4
R403		F 10
R404		C 3
R405		G 9
R406		F 9
R407		F 9
R408		F 9
R409		F 9
R501		F 4
R503		C 6
R504		C 5
R505		C 6
R506		F 4
R507		C 7
R508		C 7
R509		B 4
R510		B 4
R511		C 7
R512		C 3
R513		B 4
R514		G 3
R515		B 5
R515A		C 5
R516		E 3
R517		A 2
R518		A 2
R519		D 2
R520		D 2
R521		D 2
R522		D 2
R523		E 2
R524		G 1
R525		F 2
R526		C 1

R527		D 1
R528		D 1
R529		D 1
R530		D 1
R531		E 1
R532		E 1
R533		E 1
R534		C 2
R535		D 2
R536		D 2
R537		D 2
R538		D 2
R539		D 2
R540		D 2
R541		D 2
R542		E 4
R543	*	E 4
R544	*	E 4
R545	*	H 2
R546	*	G 1
R547		G 2
R548		G 2
R549	*	E 5
R550	*	E 5
R551	*	E 5
R552	*	E 5
R553	*	E 5
R554		G 2
R555		C 7
R556		C 7
R557		D 6
R558		E 6
R559		D 3
R560	*	H 5
R561		F 4
R562	*	G 3
R563	*	D 3
R564		G 3
R565	*	D 3
R566	*	F 4
R567		C 5
R568		I 3
R569		C 9
R570		D 9
R571		D 9
R572		C 8
R573		C 8
R574		D 8
R575		D 8
R576		D 9
R577		D 9
R578		C 8
R579		F 4
R580		C 4
R581	*	E 4
R582		C 4
R583	*	C 4
R584		C 4
R585	*	D 6
R586		C 3
R587	*	D 6
R588		C 9
R589	*	B 5
R590		B 5
R591		D 6
R592		C 4
R593	*	E 3
R602		J 5
R603		J 5
R604		H 10
R605		H 10
R606	*	I 10
R607		H 10
R608		H 10
R609		I 8
R610		J 5
R611	*	I 9
R613		J 1
R614		I 9
R615		I 9
R616		I 8
R617	*	I 8
R618	*	I 9
R619	*	J 7
R631		I 6
R632		I 6

* SOLDER SID - COT CUIVRE - C SEITE - LATO SALDATURE - LADO DEL COBRE

R633		J 6
R801		B 10
R802		A 8
R803		A 7
R804		A 7
R805		A 8
R806		A 8
R807		A 7
R808		A 7
R809		A 7
R821		A 5
R822		B 6
R823		B 6
R824		B 6
R825		B 7
R826		A 2
R827		A 4
R828		A 3
R829		A 3
R830		A 2
R831		A 2
RJ001	*	J 10
RJ251	*	G 8
RJ281	*	I 9
RJ301	*	F 6
RJ361	*	G 4
RJ362	*	G 4
RJ401	*	F 8
RJ501	*	D 6
RJ502	*	D 5
RJ503	*	D 4
RJ504	*	E 3
RJ505	*	E 4
RJ506	*	E 6
RJ507	*	A 3
RJ541	*	C 1
RJ542	*	E 4
RJ543	*	C 6
RJ544	*	C 3
RJ545	*	C 1
RJ546	*	B 6
RJ5D1	*	C 1
RJ5D2	*	C 2
RJ601	*	H 5
RJ602	*	H 5
RJ603	*	H 5
RJ604	*	G 10
RJ605	*	G 10
RJ606	*	H 10
RJ607	*	I 7
RJ608	*	J 7
RJ640	*	I 4
RJ641	*	G 10
RJ642	*	H 10
RJ643	*	H 10
RJ644	*	H 10
RJ645	*	H 10
RJ648	*	I 9
RJ649	*	I 5

SW03	B 1
SW501	C 8
SW502	H 1
SW503	H 1
SW504	C 1
SW505	C 1
SW506	A 1
SW507	B 1
SW508	A 1
SW509	A 1
SW510	H 1

X051	J 5
X301	G 6
X501	E 3
X503	E 3

Q001		H 2
Q002		H 2
Q201		D 10
Q202		D 10
Q203		E 10
Q204		E 10
Q205		E 10
Q206		D 10
Q301		E 9
Q302	*	E 9
Q305	*	F 5
Q306	*	E 7
Q307	*	F 7
Q308	*	F 6
Q309	*	F 6
Q330	*	E 5
Q331	*	F 5
Q361		H 3
Q362	*	H 4
Q363	*	H 4
Q364		H 4
Q401	*	B 7
Q506		E 1
Q507		F 1
Q508		F 1
Q509		F 1
Q510		F 1
Q511		F 1
Q512		F 1
Q513		C 1
Q514		C 1
Q515		D 1
Q516		D 1
Q517		D 1
Q518		E 1
Q519		E 1
Q520		E 1
Q521		F 4
Q601		I 5
Q602		I 5
Q603		I 5
Q604		J 5
Q801		A 7
Q802		A 7
Q821		B 4
Q822		A 3
Q823		A 2
Q825		A 2

* SOLDER SID - COTÉ CUIVRE - CÖSEITE - LATO SALDATURE - LADO DEL COBRE